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THE EDUCATION OF A DERMATOLOGIST

CHAIRMAN'S ADDRESS

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NEW YORK

The increasing demand by recent graduates in medicine for advanced training in various specialties has made necessary the current effort to develop the facilities for such education. Our graduate departments are still in their formative stage. Methods and organization vary widely in different institutions. Changes will doubtless take place as these are tested by experience. It may be of interest, therefore, to consider at this time the procedure to be followed and the facilities necessary for the education of specialists in dermatology.

METHODS OF TRAINING

The object is to develop in students an understanding of disease and skill in its management rather than to furnish them with information. This makes the choice of method important. A man must build his understanding by observation and reasoning and develop skills by practice. Neither can be set up in his mind from prefabricated units. The belief that education should begin with individual phenomena and generalizations arrived at by correlating things observed is as old as Socrates. It has been called the inductive method to distinguish it from all which teach the student facts and theories by which he may explain his observations or rules by which he may work.

The essence of inductive education is in the system of teaching anatomy developed by Mall. The student was given a part and made to dissect. Only after he had found the fascia, the muscles, the nerves and the blood vessels was he to read about them. No lectures were given, only individual discussions with the demonstrator in the dissecting room. Osler made his students clinical clerks. They took histories, made examinations and drew their own conclusions before discussing cases with their instructors. Richard Cabot taught about cases, not about diseases.

Forty or fifty years ago these ideas revolutionized medical teaching. We still avow our belief in them, but adherence to the principle of inductive education presents practical difficulties. For one, there is such a terrific variety of problems which may suddenly confront a practitioner that it is impossible to have experience with them all during the student years. The conscientious teacher fears what his pupil might do in some predicament that had never been explained to him.

Does the memorizing of symptoms, signs and treatment help? You have all been taught the antidotes for phosphorus, how to reduce a subcoracoid dislocation and how to manage a face presentation. How many remember? In an emergency, would you not have to depend on some general principles derived from cases which you had managed or help to manage? How often the instructor who has spent hours drilling a subject into the student's head is surprised to find on later examination only faint and distorted traces of it all. Yet this is the normal fate of information that is not rooted in experience.

As science and practice have progressed, the undergraduate curriculum has become more and more crowded. In the laboratory most so-called experiments follow explicit directions to a predicted conclusion. In the clinic demonstration is often substituted for practice. In all departments a variety of diseases, technics and theories are discussed in rapid sequence, and the student is forced by ordeal of examination to load his memory with information that he can never retain.

I suspect that our present medical curriculum would benefit from a radical débridement. If we could eliminate all the things that students will forget within two years of graduation we would reduce the factual material by at least one half. Should we do so our graduates would write deplorable examinations but they might make better doctors.

However, that is all an intricate problem on which I would not seem to pass cursory judgment. I say all this because I believe that in organizing graduate training we have an opportunity to develop truly inductive education. We can start unhampered by fixed ideas of details that must be covered. To do so would be in accord with our best traditions, for with all our faults we dermatologists have long had the virtue of objectivity. Our favorite occupation at meetings is examining interesting cases, and our journals are filled largely with case reports.

However, if we are to use inductive methods, we must realize that we cannot teach as many men as many things in as short a time as we might by a didactic system. We must abandon the hope of covering our whole subject or of turning out a finished product. We can, however, train our students to observe and to reason, to evaluate their own experience and to comprehend the developments of science and use them in the solution of their problems. These matters are more important than their present proficiency. They have an expectancy of life of perhaps thirty-five years. In that time medicine will advance. Few of the technical methods, only some of the concepts or even terminology that we teach them today will survive.

From the Department of Dermatology of the Vanderbilt Clinic and the Columbia University College of Physicians and Surgeons.

Read before the Section on Dermatology and Syphilology at the Ninety-Second Annual Session of the American Medical Association, Cleveland, June 4, 1941.

PROGRAM OF TRAINING

In order to derive ideas of disease from observation of cases, the student should spend the major part of his training period in the clinic and wards. He should examine and treat his own patients and follow them through the course of their illness. He should attend consultations about them in other departments. His work must, of course be controlled by an instructor, both for his own good and for the protection of the patient, but demonstration and discussion should come only after he has himself worked out a problem as best he can.

The student should serve successfully in each department of the clinic so as to gain experience with representative types of disease and different technics of treatment. His course should include a term of residence in a hospital, for there is no adequate substitute for the experience of living with patients and with colleagues working in related fields. The running time of this clinical experience requires careful planning, but the schedule should not be rigid. It should be adjusted to the interests and abilities of the individual student.

Laboratory diagnosis should be learned by examination of specimens from patients whose clinical course he can observe. Systematic laboratory courses seem necessary in histopathology and perhaps in mycology and other subjects. Such courses will, however, mean far more if used to systematize ideas derived from previous study of his own cases.

Physical therapy again is best learned by actually using the apparatus. Once a student has mastered the technics of the clinic where he works, a study of other systems will have meaning, and a discussion of physical principles and of the structure of apparatus will answer questions that have already arisen in his mind. The same applies to other therapeutic technics.

The basic sciences present a difficult problem. It is obviously desirable that the student should understand chemistry and physics, physiology, pathology and microbiology as related to dermatology; but, if we are to use inductive methods, we cannot cover all these subjects, or any one of them completely, within three years. In this quandary we may find a solution in the practice of other graduate departments. A candidate for the doctorate of philosophy chooses his major subject and elects one, or perhaps two, minor subjects which should aid his understanding of the first. Graduate training in many departments of medicine has been similarly organized. I would have each student of dermatology elect one science and spend at least six months (or half time for a year) in a laboratory, not taking courses but working. At first he may do well to assist some experienced investigator in a problem unrelated to dermatology in order to lay ground work and acquire technic, but sooner or later he should attack a dermatologic problem. As in the clinic, work must be supervised and guided, but it should be planned and executed by the student.

In this he may make no great contribution to science, but he will learn to outline an experiment that will answer a question, to use precise technic and to evaluate results. These matters are common to all sciences and should govern his work in the clinic. The student will also gain understanding of the processes which he studies, so that he can think of his clinical problems in terms of cell permeability or of lipid metabolism or of specific sensitization—whatever may be his particular field. This ability and the intangible effect of informal and intimate association with men of the laboratory will influence all his future work.

I would emphasize the value of such training for the development of the science of dermatology. If there were coming into our group young men trained in pathology, others in some branch of chemistry or physiology and still others trained in microbiology, we would see progress. Each would have ideas and methods with which to attack the problems that confront him in the clinic. Each would be able to discuss questions and to teach students from some special and illuminating point of view.

If we undertake training of this type, no time will be left for short courses in other branches of science. Does that mean our student can learn nothing of the other sciences that are necessary for his clinical understanding? I submit that he should gain a truer comprehension of these sciences by thorough work in one than by short courses in all. If what he needs cannot be derived from observation in the laboratory, much can be learned in the clinic. We should be able to teach as he faces his patients by discussing the physical and chemical processes that are going on before his eyes. He could then derive his ideas of biology from observation of clinical phenomena and such ideas would have reality.

A program such as I have outlined may be embroidered with clinics, demonstrations, lectures and seminars if one remembers that they are just embroidery and that the basic fabric is clinical and laboratory work. The more active participation by the student such exercises demand and the more they stem from the work he is doing, the better. They may be useful in stimulating interest. They often point out topics that should be studied. They may be used to assemble and evaluate material that is scattered in the literature. The student should not, however, devote too much time to watching others work or listening to what they have to say. As Mall [1] remarked, "The very name 'student' tells what the person so named should be doing."

FACILITIES FOR TRAINING

Training of the type just discussed requires more extensive equipment and makes greater demands on the time, interest and ability of the staff than does a more formal type of instruction.

1. *An Outpatient Department.*—This should be arranged in sections so that patients requiring special forms of treatment, such as radiotherapy, chemotherapy or minor surgery, or special diagnostic procedures, such as allergic studies, and also those presenting some problem under investigation may be grouped together. As dermatologists now bear the main responsibility for the care of syphilis, a special section should be equipped for this purpose. The clinic should also have diagnostic laboratories for histopathology, mycology and bacteriology and possibly for other fields. It should be equipped for radiotherapy, actinotherapy, minor surgery and other forms of treatment of special importance to the dermatologist. The laboratories and treatment rooms should be grouped in the clinic so that the student may use them for his own cases and so correlate this work with his clinical observation. The clientele

1. Mall, Franklin P.: The Anatomical Course and Laboratory of the Johns Hopkins University, Bull. Johns Hopkins Hosp. 7: 85 (May-June) 1896.

of the clinic must be large enough to include examples of the rarer dermatoses.

2. *A Ward Service.*—This should be large enough and sufficiently endowed to provide the prolonged hospitalization required for severe chronic dermatoses. It should be designed, equipped and staffed especially for its purpose. The conventional hospital ward is ill adapted for the care of our patients, many of whom are ambulant and many of whom require isolation. Few nurses or orderlies know anything about their special care. Actinotherapy, balneotherapy, fever therapy and dust-free rooms are among the many special requirements.

3. *Research Laboratories.*—It is important for the education of both students and staff that research be conducted within the department. Rooms equipped for chemical, physiologic, pathologic and microbiologic work with easy access to clinic and wards should be provided.

4. *Teaching Space.*—Conference and demonstration rooms, a small department library, offices for the staff and desks in the laboratories or elsewhere for each student should be provided, and perhaps even a lecture room for rare occasions.

5. *Staff.*—The clinical staff should include men specially interested in different phases of dermatology. They should have time for teaching and research as well as for the care of their patients. Whether they are "full time" or "part time" is not the chief criterion of their effectiveness, but at least a group of junior men on adequate salaries devoting full time to the institution seems essential. A similar senior staff would be desirable.

The laboratory staff should include at least a pathologist, a chemist, a physiologist and a mycologist. To obtain such a staff means finding not only the men but salaries, technicians, equipment and supplies. Their selection would be determined by the main lines of investigation which were planned. They would be most effective if chosen to do correlated work on some general problem, for example avitaminosis.

6. *Fellowships and Residencies.*—These should be provided for the students. The problem of support becomes more difficult as a man becomes older, and few can carry on a long period of graduate study if compelled to pay their expenses.

The department should be a part of a medical school and hospital. Its clinic, its laboratory and its library should provide only those facilities of peculiar importance to dermatology.

THE OPPORTUNITY

Perhaps I have said too much about methods and equipment. In all education the essential thing is the teacher. We have among us those who, by their own force and ability, have done outstanding work with inadequate facilities and scant financial support. They deserve the greater credit for succeeding under these handicaps.

What I would emphasize is the desirability of providing our teachers with the means for proper graduate education. These are essential if they are to develop future teachers and practitioners who will bring to patients with disease of the skin the full benefits made available by the advance of science.

An organization such as I have tried to outline is not to be found in this country. Many schools, otherwise lavishly equipped, make practically no provision for dermatology. Few have sufficient ward space and none have adequate laboratories. Yet the clinics of Breslau, Zurich and Strasbourg were, until recent upheavals, developed much along these lines, and Berlin, Vienna, Paris and other European centers had clinical facilities more extensive than those I have suggested. Why has so little been done here?

Fortunately many departments of internal medicine and of surgery and some of pediatrics are almost ideal in their organization and equipment. There are excellent institutes for neurology, psychiatry, ophthalmology and urology. The needs of dermatology and the opportunity it offers for advancing the science of medicine seem almost unrecognized by our organizers of medical education.

This is not the place to discuss the contributions of dermatology to medicine, but I would remind you that dermatology has led the way in recognition of the varied clinical response to infection with the tubercle bacillus, that sarcoidosis was familiar to the dermatologist before the internist was aware of its existence, and that the same may be said of lymphogranuloma venereum and coccidiomycosis. Studies on sensitization of the skin have contributed much to our knowledge of allergy. The modern treatment of syphilis and consequent control of that disease have been developed largely by dermatologists.

No field should offer greater attraction to those who wish to carry on investigation. There are many well classified dermatoses the etiology of which is quite unknown—almost as many as there are internal diseases. In few lesions can the mechanisms of disease be so directly studied as in those of the body surface which can be closely and continuously observed, tested as to their response to various stimuli and repeatedly sampled for chemical or microscopic study.

In an address before the Congress on Medical Education and Licensure, Alan Gregg [2] listed and discussed "special opportunities for development in medicine in the decade now before us," among them dermatology. May I quote from his remarks?

> In many American medical schools the budgetary support for dermatology is farcical. . . . Is it in any sense wise . . . to deny a considerable number of beds and the contributions of histology, physiology, biochemistry, pathology, bacteriology, psychiatry and internal medicine to the dermatologists? The usual skimping of scientific resources and collaboration for the dermatologists presents the classic picture of deliberate neglect in that the chief losers are probably not the dermatologists but medicine as a whole. It is exactly from neglected fields that we may expect our most significant advances.

102 East Seventy-Eighth Street.

2. Gregg, Alan: Addenda to the Agenda for the Decade 1940-1950, J. A. M. A. **114**: 1139 (March 30) 1940.

Why We Need Water.—Practically all the body materials except skin, cartilage, bone and fat will dissolve in water, and every kind of tissue contains much of it—from bone, which is about one-third water, to a fluid tissue like blood about four fifths of which consists of water. In every cell of the body the materials of which it is made are present in watery solution, while about 10 pounds of water are circulating constantly to all parts of the body to carry soluble nourishment to the cells and soluble waste products away from them.—Bogert, L. Jean, and Porter, Mame T.: Dietetics Simplified, New York, Macmillan Company, 1940.

PATIENTS' ATTITUDES AND BEHAVIOR IN WARD ROUND TEACHING

JOHN ROMANO, M.D.
BOSTON

Bedside teaching is an established procedure in medical education. Its value as a teaching method and the advantages and disadvantages to the instructor and student have been considered by others. The patients' reactions to this procedure, on the other hand, have received little attention. There have been numerous essays which have considered the patient-physician relationship and the need for interpretation of personality structure with expression of sympathy and tact at the bedside. However, these have not been based on direct study of patients' reactions and are, for the most part, points of view and appeals for sympathetic attitudes.

In order to obtain more objective data, an investigation was undertaken to study patients' reactions and behavior during ward round teaching. Specific attempts were made to discover whether the experience is traumatic, to gain further insight into patients' reactions to their illnesses and to learn how the procedure might be utilized as psychotherapy.

METHODS OF STUDY

Ward Rounds.—One hundred unselected patients in the medical service of the Peter Bent Brigham Hospital were studied before, during and after Saturday morning teaching rounds. These rounds consist of the presentation of 1 or 2 patients from each of the four medical wards to a group of from fifty to seventy persons comprised of members of the hospital staff, visiting physicians, students and nurses. The patient is placed in his bed in the center of the ward with the case records, laboratory sheets, charts, roentgenograms and other laboratory preparations on adjoining tables and screens. Usually a patient has had to wait from a few minutes to an hour before rounds reach his ward. As the group enters the ward and disperses itself around the bed, the presiding physician speaks to the patient and introduces himself if the patient does not already know him. After the significant data have been presented by the house officer, the patient may be interrogated and examined by the various staff members. Various details of the history, physical examination or laboratory data may be reviewed more specifically with suitable objective preparations. Following this, there is a discussion of the various diagnostic, therapeutic and prognostic aspects of the problem. Occasionally guest clinicians and investigators are present to discuss problems in which they have special interest. In most instances patients remain for the complete discussion period. The total period of presentation of one patient varies from thirty to ninety minutes.

This teaching procedure was chosen in preference to the daily, more informal ward rounds, since the former is more uniform in the preparation, observation and examination of patients, in the manner in which it is conducted and in the staff direction. It was assumed that if untoward results were to occur they would occur more frequently in the former procedure, as the formal, more public experience is associated with more anxiety.

From the Medical Clinic of the Peter Bent Brigham Hospital and the Department of Medicine, Harvard Medical School.

Preparation of Patient.—All patients who were presented were seen by the senior house officer of the ward the preceding afternoon or evening. Each patient was told that he was to be presented before a large group of physicians, that he was chosen because his problem presented certain difficulties which would be better understood and treated after general discussion, that he would be examined or interrogated concerning his illness and that the conference would last approximately one-half hour.

Before presentation, each patient was studied for an evaluation of his personality structure and the emotional significance of the illness to him. In addition, pulse, respiration and blood pressure were determined.

Examination During Presentation.—During the presentation the patient was observed for changes in facial expression, blushing, pallor, sweating, restlessness, crying and laughter. Care was taken to observe the patient's reaction to the approach of the group to the bedside, the recounting of the history, the examination, the questioning and the discussion or absence of discussion. The influence of any ambiguous or untactful remark concerning the patient, his illness or experimental data allied to the latter was noted particularly. Pulse, respiration and blood pressure were determined at the conclusion of the presentation.

Examination After Presentation.—The patient was interviewed from one to three hours after the presentation. Objective evidences of anxiety were noted. When possible, a spontaneous discussion of the patient's reactions to the teaching procedure was obtained. This was supplemented by questions related to various phases of the procedure. Many patients were asked to define certain medical terms and abbreviations used at the bedside. Interviews were also held with ward nurses, fellow patients and relatives in order to supplement and objectify the patient's responses.

With the exception of 4 girls aged 9 to 12 years and 1 boy aged 13, the patients were adult. The disorders were those observed in a general hospital medical service and thus included infectious, deficiency, metabolic, neoplastic, degenerative and psychogenic processes in varying degrees of severity.

By means of the psychiatric examination preceding the presentation, the patients were classified as having (*a*) little anxiety associated with their physical disease (29 men, 30 women), (*b*) considerable anxiety associated with their physical disease (9 men, 16 women), (*c*) predominantly neurotic symptoms with no demonstrable disease (2 women) and (*d*) confusion or fluctuation of the level of awareness due to various toxic or allied factors with varying degrees of anxiety (11 men, 3 women).

RESULTS

No severe emotional trauma was observed. In instances in which patients were tense or anxious, the reactions were mild and in no way resembled panic reactions. On the contrary, the attitudes and behavior of these patients revealed considerable insight into the positive value of ward round teaching. In the following, the attitudes and behavior of patients will be discussed as they were observed during the various phases of the teaching exercise.

Behavior and Attitude Before Presentation.—Only 4 patients disapproved of the preliminary explanation. By each of these the explanation was not completely understood. A 27 year old housewife of limited intel-

lectual endowment, experiencing considerable anxiety with erythema nodosum, complained that she had not understood the explanation and that she had been perplexed by the ward rounds. A second patient, an elderly Italian housewife who understood little English, worried over what the doctor had told her before the exercise. The remaining 2 patients were confused before and during the presentation. In these 2, the fluctuation of the level of awareness was apparent. Significant, from a positive point of view, was the grateful appreciation of most of the patients for this preliminary explanation. Not unusual was the expression of a woman aged 64 with facial erysipelas: "Seems to me you doctors could make us feel better if you spoke our language and told us some of the things that are happening to us."

In this phase before presentation, the significant untoward reactions were those of varying degrees of anticipatory anxiety. Twenty-four patients expressed themselves as feeling uneasy, tense, restless, anxious for it to be over or wondering what was to take place. Of these 24 patients, 12 had been considered to be experiencing considerable anxiety in their illness, 7 were confused and 2 were neurotic personalities without physical disease.

Behavior and Attitude During Presentation.—The anticipatory anxiety reached its peak immediately before and during the entrance of the group to the ward. Those patients who experienced anxiety most intensely were those previously noted. They comprised less than one fourth of the total number. In 16 there were objective evidences of tension characterized by blushing, motor restlessness, tossing of the head on the pillow, sighing respirations and picking at the bed linen. In addition to the remarks describing restlessness and uneasiness, the patients complained of "funny feelings in the stomach," "abdominal rumbling," "as if I had to pass water," "my heart beat fast and turned over." Only the 2 neurotic women showed significant changes in pulse and blood pressure. The anxiety of these patients was greatest as the group approached the bedside, decreasing after that. The following remarks illustrate the "let-down." A shy, sensitive youth aged 17 convalescing from pneumonia stated: "I was pretty nervous before they came in, wondering what was to happen, but after they came in and the doctors began to tell them about my case, I felt much better." A young housewife with respiratory alkalosis and tetany associated with her anxiety stated: "My heart kind of went funny, my hands perspired and that funny feeling in my face and hands was coming on before they came in. After they came in it wasn't as bad as I thought it was going to be."

Thirteen patients were distressed by the recitation of the history. The following factors were of most importance: When historical data were presented which were unfamiliar to the patient, they caused considerable surprise and concern. This was illustrated by a young man who had experienced amblyopia and convulsions in the course of hypertensive encephalopathy. It was during the recitation of the history that he became aware for the first time that he had had seizures. This surprised and alarmed him, and he asked why he had not been told before and what was the significance of the seizures.

The recitation of data related to past or present personality difficulties led to resentment, anger and humiliation. A young Greek-American housewife with endemic malaria enjoyed the presentation and discussion. However, she resented and was humiliated by the inclusion in the history of an attempt at suicide nine years before. "I felt as if my soul was exposed, and the fact that I did try to commit suicide I wish he hadn't said before all those people."

Social data, especially if they concerned prestige or security factors, provoked resentment. An elderly woman with tuberculous peritonitis became upset when it was stated that she was a fortune teller. She had had two trichobezoars removed from her stomach in the past, and she was relieved when the term "trichobezoar" was used in preference to "hair ball." On inquiry it was found that the patient did not mind being known as a fortune teller, but she feared that the relief authorities would curtail her allowance if they believed that she had other sources of income.

In the following, the use of a descriptive phrase acted as a trigger which allowed the patient to express considerable resentment which had previously been concealed. An educated, formerly successful business man who was addicted to alcohol and had multiple nutritional deficiencies was most disturbed when it was mentioned that the pain in his feet was thought to be due to poorly fitting secondhand shoes. "The only thing that bothered me at all was the mention of the secondhand shoes. That sort of wounded my dignity. Why couldn't they have said on old pair of shoes?"

From a positive point of view, most of the patients received considerable satisfaction from hearing the history. Many stated that they had heard it often enough so that they were on the alert for changes, and occasionally they would take pride in correcting the house officer concerning this or that point. Many expressed frankly that it was comforting to know that the doctors had taken such pains to learn all about them.

Seven patients were annoyed by physical examinations during the procedure. Two factors seemed to be of considerable significance. One was the sensitivity and embarrassment of patients to being disrobed and examined before a group. A sensitive obese girl thought every one was looking at her fat legs. A slightly confused myxedematous woman stated that too many had felt of her hair and skin. The second factor resulted from confusion following examinations which drew attention away from the principal complaint to a new anatomic site. This new and usually misunderstood emphasis caused considerable distress. A boy aged 13 with diabetes and nephrosis asked: "I wondered why they examined my heart so long; I haven't got heart disease, too, have I?" When attention was directed to a hitherto unnoticed adenomatous thyroid nodule in an elderly Negro suffering from an abdominal complaint, it perplexed him and led him to say: "My trouble is in my stomach. I can't see why they kept on feeling my neck and talking about operations."

Three patients were disturbed by the presence of charts, diagrams and roentgenograms. In each instance, this occurred in anxious patients who had been perplexed as to what the data signified.

The patients were untroubled by the infrequent group laughter which took place during ward rounds. Many patients laughed with the group and felt more at ease after it. A prim housewife laughed with the group when her spleen, once enlarged, was no longer palpable. Later, she appeared pleased with her description: "It's

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lectual endowment, experiencing considerable anxiety with erythema nodosum, complained that she had not understood the explanation and that she had been perplexed by the ward rounds. A second patient, an elderly Italian housewife who understood little English, worried over what the doctor had told her before the exercise. The remaining 2 patients were confused before and during the presentation. In these 2, the fluctuation of the level of awareness was apparent. Significant, from a positive point of view, was the grateful appreciation of most of the patients for this preliminary explanation. Not unusual was the expression of a woman aged 64 with facial erysipelas: "Seems to me you doctors could make us feel better if you spoke our language and told us some of the things that are happening to us."

In this phase before presentation, the significant untoward reactions were those of varying degrees of anticipatory anxiety. Twenty-four patients expressed themselves as feeling uneasy, tense, restless, anxious for it to be over or wondering what was to take place. Of these 24 patients, 12 had been considered to be experiencing considerable anxiety in their illness, 7 were confused and 2 were neurotic personalities without physical disease.

Behavior and Attitude During Presentation.—The anticipatory anxiety reached its peak immediately before and during the entrance of the group to the ward. Those patients who experienced anxiety most intensely were those previously noted. They comprised less than one fourth of the total number. In 16 there were objective evidences of tension characterized by blushing, motor restlessness, tossing of the head on the pillow, sighing respirations and picking at the bed linen. In addition to the remarks describing restlessness and uneasiness, the patients complained of "funny feelings in the stomach," "abdominal rumbling," "as if I had to pass water," "my heart beat fast and turned over." Only the 2 neurotic women showed significant changes in pulse and blood pressure. The anxiety of these patients was greatest as the group approached the bedside, decreasing after that. The following remarks illustrate the "let-down." A shy, sensitive youth aged 17 convalescing from pneumonia stated: "I was pretty nervous before they came in, wondering what was to happen, but after they came in and the doctors began to tell them about my case, I felt much better." A young housewife with respiratory alkalosis and tetany associated with her anxiety stated: "My heart kind of went funny, my hands perspired and that funny feeling in my face and hands was coming on before they came in. After they came in it wasn't as bad as I thought it was going to be."

Thirteen patients were distressed by the recitation of the history. The following factors were of most importance: When historical data were presented which were unfamiliar to the patient, they caused considerable surprise and concern. This was illustrated by a young man who had experienced amblyopia and convulsions in the course of hypertensive encephalopathy. It was during the recitation of the history that he became aware for the first time that he had had seizures. This surprised and alarmed him, and he asked why he had not been told before and what was the significance of the seizures.

The recitation of data related to past or present personality difficulties led to resentment, anger and humiliation. A young Greek-American housewife with endemic malaria enjoyed the presentation and discussion. However, she resented and was humiliated by the inclusion in the history of an attempt at suicide nine years before. "I felt as if my soul was exposed, and the fact that I did try to commit suicide I wish he hadn't said before all those people."

Social data, especially if they concerned prestige or security factors, provoked resentment. An elderly woman with tuberculous peritonitis became upset when it was stated that she was a fortune teller. She had had two trichobezoars removed from her stomach in the past, and she was relieved when the term "trichobezoar" was used in preference to "hair ball." On inquiry it was found that the patient did not mind being known as a fortune teller, but she feared that the relief authorities would curtail her allowance if they believed that she had other sources of income.

In the following, the use of a descriptive phrase acted as a trigger which allowed the patient to express considerable resentment which had previously been concealed. An educated, formerly successful business man who was addicted to alcohol and had multiple nutritional deficiencies was most disturbed when it was mentioned that the pain in his feet was thought to be due to poorly fitting secondhand shoes. "The only thing that bothered me at all was the mention of the secondhand shoes. That sort of wounded my dignity. Why couldn't they have said on old pair of shoes?"

From a positive point of view, most of the patients received considerable satisfaction from hearing the history. Many stated that they had heard it often enough so that they were on the alert for changes, and occasionally they would take pride in correcting the house officer concerning this or that point. Many expressed frankly that it was comforting to know that the doctors had taken such pains to learn all about them.

Seven patients were annoyed by physical examinations during the procedure. Two factors seemed to be of considerable significance. One was the sensitivity and embarrassment of patients to being disrobed and examined before a group. A sensitive obese girl thought every one was looking at her fat legs. A slightly confused myxedematous woman stated that too many had felt of her hair and skin. The second factor resulted from confusion following examinations which drew attention away from the principal complaint to a new anatomic site. This new and usually misunderstood emphasis caused considerable distress. A boy aged 13 with diabetes and nephrosis asked: "I wondered why they examined my heart so long; I haven't got heart disease, too, have I?" When attention was directed to a hitherto unnoticed adenomatous thyroid nodule in an elderly Negro suffering from an abdominal complaint, it perplexed him and led him to say: "My trouble is in my stomach. I can't see why they kept on feeling my neck and talking about operations."

Three patients were disturbed by the presence of charts, diagrams and roentgenograms. In each instance, this occurred in anxious patients who had been perplexed as to what the data signified.

The patients were untroubled by the infrequent group laughter which took place during ward rounds. Many patients laughed with the group and felt more at ease after it. A prim housewife laughed with the group when her spleen, once enlarged, was no longer palpable. Later, she appeared pleased with her description: "It's

not a palpable but an elusive spleen." No ideas of reference or undue sensitivity arising from the laughter were noted.

Behavior and Attitude During Discussion.—Of the 69 patients who remained for discussion, 11 would have preferred to have been removed from the ward. The reasons given for preferring to leave were those related to physical discomfort (pain, fatigue, hunger), those related to anxiety and those related to indifference concerning the medical discussion.

Thirty-one patients were removed before discussion. Fifteen were removed for reasons of physical disease, 12 because of anxiety and 4 for experimental purposes of comparison. Sixteen of the 31 patients would have preferred to remain for the complete discussion. This preference was based on the beliefs that they did not want to miss anything concerning themselves and that they gained reassurance from the group discussion. This preference was particularly true if patients had been presented previously or if they had seen other presentations. In these instances considerable anxiety was expressed when the patients were removed. As one patient stated: "This happened once before and I stayed through it. This made me wonder why I couldn't stay and whether my condition was getting worse."

Over half the patients stated that they understood the essential substance of the discussion. However, a much smaller number gave objective evidences of such understanding. The fact remains that discussions dealing with the care of diabetes, heart disease, hypertension, arthritis, and peptic ulcer were of such a nature that they served to educate the patient in the care of his disease.

All patients were pleased by the personal interest of the staff. The presence of the nurse at the bedside, a reassuring word and the calling of the patient by name did considerable to allay tension and anxiety. One elderly scorbutic patient, impressed with the friendly interest of the presiding physician, said: "It made me feel important, too—almost as important as these damn red splotches on my skin."

Divergent opinions of the discussants played no significant role in distressing the patients. Actually, the interchange of staff opinion was a source of reassurance to most patients, as they believed their problems were studied more thoroughly.

Sixteen patients believed that the discussion lasted too long; five were of the opinion that it was too short. Some of the expressions supporting the latter opinion demonstrated the prestige value and the intensity of emotional concern associated with the illness.

An elderly patient with postural hypotension asked if it were true that he had a rare and interesting disease. When told his condition was relatively uncommon and that a number of the staff were interested in the condition, he asked somewhat indignantly "Then, for heaven's sake, why didn't they talk about it longer than ten minutes? Why, twenty years ago I was operated on for hemorrhoids at the — — — hospital and they talked about my case for half an hour!" A frequently hospitalized elderly woman with angina announced to her bed neighbors that this was the morning she was to be the "duchess of the ward."

A middle-aged man, considerably concerned about a severe headache which had remained undiagnosed, believed the discussion was altogether too short, since no one seemed to be able to throw any light on his problem.

Vocabulary.—Fifty patients were asked to define sixty medical terms and abbreviations used frequently in bedside conferences. These terms included "acid-fast," "CA.," "lues," "neoplasm," "mitosis," "Koch's bacillus," "P. A.," "G. C.," "ALC.," "EKG," "Wassermann," "growth," "tumor," "shock," "stroke," "neurotic," "nervous breakdown" and "prognosis."

No patient understood the terms "mitosis," "neoplasm," "metaplasia," or "metastasis"; 2 knew what "CA." meant; 3 understood "malignancy" and "carcinoma"; the majority interpreted "tumor," "growth" and "new growth" as "cancer," or as something growing somewhere, usually in the stomach. "Koch's bacillus" was totally unfamiliar. "Acid-fast" meant "contagious" or "concerning a germ" to one patient. "TB" was known by the majority of the patients. "Serology," "specific infection," "P. I. D.," "Hinton," "complement fixation," "Neisserian" and "spirochetal" were unfamiliar. Only 2 patients understood "lues" correctly; 8 understood "G. C." and 10 understood "Wassermann." Ten patients knew "leukemia"; 5 interpreted "lymphoma" and "Hodgkins" as "gland swellings"; 4 were familiar with "P. A." The terms "hypertension," "coronary" and "angina" were interpreted as dealing with the heart by 11 patients. "Shock," "stroke" and "paralysis" were used interchangeably. "Neurotic" was usually interpreted as "being off," "nuts" or "due to imagination," while "nervous breakdown" was attributed to overwork. "Degenerative" was usually interpreted in the moral sense of an antisocial, perverse personality, rather than a destructive tissue change. "Prognosis" was vaguely familiar to many, defined correctly by 1 and defined as "no hope" by 2 patients, who cited the moving picture "Dark Victory" as their source of information.

Usually patients were more familiar with terms associated with their own illnesses. Patients associated with hospitals in one capacity or another and those hospitalized for long periods of time were able to define more terms correctly.

COMMENT

This investigation indicated that the preliminary examinations were valuable in interpreting the experiences of the patients. Their greatest value lay in estimating the threshold for anxiety. With the stimulus (presentation) more or less constant, the degree of anxiety experienced was a further means of revealing personality structure and the emotional significance of the illness to the patient. The patient's participation in the teaching procedure and the opportunity for him to talk about it led to direct and indirect disclosures of personal concepts of health, of disease and of the emotional significance of disability. These data varied from ignorance and misinterpretation, which had provoked considerable anxiety, to manifest utilization of illness, either consciously or unconsciously, as a socially acceptable outlet for anxiety.

It was indicated that brief explanatory interviews to patients were of considerable aid in avoiding perplexity and correcting misinterpretation. Not only were the patients appreciative of the preliminary interviews, but most of them requested that the essential conclusions of the conference, particularly as they related to their

illness, recovery and return to work, be communicated to them in simple, understandable terms. This can be done best by the house officer who is most familiar to the patient, who has previously explained the procedure to the patient and who has presented the case history. The form and content of this final explanation will vary with the problem, the patient and the nature of the patient-physician relationship. In most instances it is possible to explain the essential program of therapy and the probable period of disability. Opportunity also exists in the latter explanation for the house officer to correct any misinterpretations which the patient may have concerning his illness, medical terms or staff opinions.

This study indicated further that some degree of anticipatory anxiety is inevitable in the presentation of patients. This type of anxiety is not unusual and is probably related to the anxiety experienced by speakers, actors and students before performance or examination. The intensity of the reaction is dependent not alone on the nature of the stimulus but also on concealed or unconscious anxiety associated with the illness. The anxiety may be lessened by means of a preliminary explanation and by tactful and sympathetic presentation. Care should be taken to avoid public presentation of detailed personal and social data in the patient's presence. In many instances these data are not sufficiently relevant to the immediate medical problem and may offend or embarrass the patient. Unfortunately, among lay persons and frequently among physicians, medical students and nurses, emotional factors are equated with moral values. An anxious patient is apt to be considered morally weak as often as he is accepted as a sick person. This was demonstrated in the patients' discrimination in defining "neurotic" and "nervous breakdown." The former connoted intellectual and moral decay, while the latter was interpreted invariably as a socially acceptable state of exhaustion due to overwork. When there are pertinent psychogenic factors, the presentation and discussion may be conducted in the patient's absence. In these instances, the patient may appear briefly for purposes of demonstration or interview. It has been learned that tactful discussion of the interrelationships between psychologic and somatic factors in the presence of certain patients has been of value in initiating emotional as well as intellectual insight. However, the danger of focusing further attention on somatic and visceral symptoms in neurotic personalities is an ever present one.

Unnecessary exposure should be avoided. When there is need for extensive display of the body, loin cloths or trunks should be used.

It was indicated that while the entire procedure of the ward rounds may and should be utilized as psychotherapy, the discussion period has the greatest potential value. In the discussion of certain disorders, the content was understandable to the patient and thus was of aid in enlisting his interest in the care of his disease. This was particularly true of patients who had diabetes, peptic ulcer and arthritis. However, a greater number of patients were more impressed with how the discussants spoke and behaved than with what they said. A sympathetic, confident and reassuring attitude at the bedside helped to allay the patient's anxiety and served to maintain a more adequate patient-physician relationship. While this is dependent on the behavior of the entire group, it is the responsibility of the presiding physician to establish the rapport.

The bedside manner is the resultant of the patient-physician relationship. Essentially, this is an interpersonal relationship of emotional rather than of intellectual origin. In this relationship the patient identifies the physician with previous sources of emotional security. This identification serves to facilitate the expression of anxiety. Awareness by the physician of his role as a substitute source of security will help him to understand objectively his emotional significance to the patient. With this awareness there will come understanding of the not infrequent extremes of overvaluation or hostility which characterize patient-physician relationships.

SUMMARY AND CONCLUSIONS

The attitude and behavior of 100 patients were studied before, during and after weekly bedside ward rounds. Methods of study included evaluation of personality, observation during presentation and spontaneous discussion and interview following presentation. Pulse, respiration and blood pressure determinations were compared before and immediately after presentation. The patients were classified according to the degree of anxiety associated with their illness and according to the presence or absence of confusion.

No severe emotional trauma was observed. In instances in which the patients were tense or anxious, the reactions were mild and in no way resembled panic reactions. Most patients preferred to be told that they were to be presented. Anticipatory anxiety was experienced by roughly one fourth of the patients. Only 2 patients presented significant fluctuations in pulse or blood pressure. Thirteen patients were distressed by one or more factors during the recitation of the history; 10 patients were distressed by the examination and by the display of charts. Most medical terms and abbreviations were misunderstood or unfamiliar to the patients.

Most patients preferred to remain for discussion, particularly if they had been presented before or if they had seen others presented. Physical discomfort, anxiety or indifference constituted indications for removing patients before discussion.

This investigation indicated that detailed personal and social data should not be mentioned in the presence of the patient; that the discussion period should be used to educate the patient in the care of his disease and that it should serve to foster rapport and confidence in the patient, and that the essential conclusions of the conference, particularly as they are related to the patient's illness, recovery and return to work, should be communicated to him in simple and understandable terms.

It indicated further that brief explanatory interviews before and after each teaching exercise have two purposes: One is to avoid surprise and to correct misinterpretation. The other is to aid in acquainting the house officer with the personality structure of the patient and the degree of anxiety associated with the illness and in establishing a more adequate patient-physician relationship.

Ward round teaching, when conducted tactfully and sympathetically, with attention to the aforestated considerations, is not a traumatic emotional experience to patients but educates and reassures them.

MEDICAL ILLUSTRATION

MAX BRÖDEL
BALTIMORE

This article is a brief attempt to describe the subject of medical illustrating as I see it, state the necessary qualifications of an applicant who wishes to devote his life to this work and tell of the opportunities for success in this field after he has systematically studied the subject and has mastered it in its essentials.

It is agreed that a medical picture, correctly planned and accurately and artistically executed, is an integral part of the medical literature. It not only elucidates the text when needed but may in part even replace it. On the other hand, if not correctly planned or inaccurately drawn, or both, as often is the case, the picture is worse than useless and should be omitted. It is the business of the author of the book or article to eliminate a worthless picture. But it is also the duty of the illustrator to know when a picture is bad. He should realize his responsibility toward the medical profession and never attempt a picture until he is certain that his knowledge and skill are equal to his task.

Every picture should be the work of the artist who signs it. This is not always so. Medical illustrators have learned how to plagiarize; some do it cleverly, others clumsily. It is so easy to lean on others, to borrow or copy another man's picture or a part of it instead of choosing the honest road of original study from nature. Unfortunately the medical literature still contains such plagiarized pictures. It may be stated that economic factors, demanding speed, sometimes force the artist to copy rather freely without giving credit. He is content with a little alteration here and there and calls it a new picture, his own. But he does not realize that old pictures are apt to contain errors, sometimes glaring ones. A plagiarist who is too indolent to seek the truth through original investigation and copies old illustrations with ancient errors perpetuates them. For this reason alone there should be no plagiarism in medical pictures.

Medicine has made enormous strides within recent years. The changes have been both rapid and startling. It is the business of the illustrator to understand them and adapt himself to the new order of things. One of the changes affecting the artist is that photography has entered the field in competition with him. It has come to stay. It threatens to replace the hand made picture, which of course it will never do. True, photography has many advantages over drawing. It is quicker, cheaper and often also more realistic. But a photograph is not a medical illustration in the strict sense of the word. It is a valuable record of something which is easily seen and understood, which is to say the obvious. It fits admirably into a medical or surgical history; it shows clinical phenomena, external lesions, gross as well as microscopic specimens under low, medium and high magnification. Even operations have been shown both in still and in moving pictures. It is stated that a photograph is irrefutable proof of a form or fact under dispute, which of course is not true.

I believe that the illustrator will learn to regard the photographer not as a rival to be feared but as a helpful friend, especially in microscopic drawing, the bane of the medical artist. No longer does his pen have to draw thousands of nuclei, cradled in their elusive cytoplasm; no longer does he have to count their number, copy their form and size and also group and space them accurately. To do this all day, every day for months, was a trying ordeal. Fifty years ago there was no mechanical aid, no camera lucida, no photography. All such drawings had to be made by the artist free hand. I have labored over hundreds of them in color, in tone or in pen and ink. But it has done me no harm. Today these sections are all photographed, excepting an occasional section under high power, at which photography has failed in precision.

Photography is now used in every branch of medicine; it is employed with great skill, often to the entire satisfaction of the author and the investigator. It shows form, structure, color and texture, all with complete realism.

But it does not analyze, interpret or teach. It gives no answer to the host of inquiries which plague the student. It makes a dramatic picture, not a scientific one. It rarely shows more than what the photographer has understood, which is rather meager information. There are countless structures in the human body, both small and large, and yet so elusive in form and placement that they escape visual registration almost completely. Their significance is unquestioned and their behavior in health and disease a matter of great importance to medical science. They are there, and yet the eye cannot make them out without close study and observation. The camera in this circumstance is helpless, but the hand-made picture can bring them out with complete fidelity and make them comprehensible to the reader, student, novice and even layman.

Nearly every photograph in the medical literature can be made more valuable by the addition of an explanatory sketch or diagram, a synthetic picture, so to speak, created in the mind of the artist.

A medical picture may even be entirely synthetic and yet be drawn with convincing realism. To make such a picture the artist must know his subject so thoroughly that he can shut his eyes and coax into existence a mental picture of great clarity, complete in every respect. He also must be fully equipped to put this imaginary picture on paper, swiftly, accurately and, if necessary, with convincing realism. This is medical illustrating at its best.

The technic is a matter of choice—halftone, water color, oil, lead pencil, simple or elaborate pen and ink, or a combination of these. It should be remembered, however, that technic, artistic feeling, accurate draftsmanship, neatness and speed are all relatively unimportant. The planning of the picture and the registration of the scientific facts are what gives it its value, not the execution.

As a rule a simple outline drawing is harder to make than an elaborate plastic picture. It is perhaps the most eloquent and useful type of medical illustration. Much information, explanation and analysis can be crowded into a diagram. It may be stripped entirely of all form and structure, relying for its message solely on well chosen key words, figures and numbers, connected by lines and rendered more expressive by the addition of symbols, such as loops, rings, arrows and the like. Even the time element can be graphically shown, also cause and effect, sequence of stages in a disease or an operation. Most instructive pictures can be made that way.

For more than fifty years it has been my privilege to make medical illustrations in all the branches of the field.

Since March 1911 I have also taught medical illustrating at Johns Hopkins University School of Medicine. The experience gained during this long period may be of interest to those wishing to become medical illustrators. I shall try to show that the making of a medical picture is an intricate process, requiring much specialized knowledge and skill. It takes years of preparation to become an artist good enough to serve the medical profession.

A number of institutions now offer courses in medical art, some of them, as far as I can make out, rather sketchy. One instructor even claims to teach the subject in two evenings a week for four months. It should be obvious to any one that such teaching is entirely inadequate. The medical literature must be protected against poor pictures and the pupils from false promises.

HOW I BECAME A MEDICAL ILLUSTRATOR

The art department at Johns Hopkins medical school was the first of its kind in existence. I did not plan it. It came into being through a series of fortunate circumstances which I shall briefly describe.

1. Fifty years ago most medical pictures in textbooks and journals were done by untrained, self-taught artists who knew very little about medicine and less about art. There were no others available, and as a consequence the pictures in the medical literature were of poor quality, far beneath the illustrations in nonmedical publications such as magazines and story books. The draftsmanship of medical pictures was amateurish, the object ineffectively posed and illuminated, sometimes inaccurate in regard to its anatomy and topography. The object evidently was not properly understood by the artist, and the author was unable to help. He probably knew that something was wrong with the picture, but his attempt to suggest corrections usually made it worse. It must be admitted that the atlases were notable exceptions. They were costly tomes, mostly from an earlier period, magnificently illustrated with elaborate copper and steel engravings, later on by lithography, often in gorgeous colors. Much of their beauty was due to the exquisite technic of the engraver or lithographer, not to the artist who made the originals. The same was true of the really fine wood engravings of the early textbooks.

The photomechanical method of reproduction ended this period, and the cheap reproduction of poorly made drawings began.

This was the state of medical illustrating when I entered the service of Dr. Howard A. Kelly on Jan. 18, 1894.

2. I had been fortunate in having received my art training in an academy where meticulous draftsmanship was insisted on and where the graphic arts were included in the curriculum. Both were of great help to me in medical art.

It was also lucky for me to be poor, for I had to seek work during the summer vacations and other free hours throughout the year. I came under the eye of Prof. Carl Ludwig, the great physiologist, and was permitted to illustrate his research and that of his famous pupils. In the course of this work I met Dr. F. P. Mall and Dr. William H. Welch.

3. Luck pursued me. Through Dr. Mall I came to know and work for Dr. H. A. Kelly, whose brilliant work in gynecology marked the beginning of a new era in that field. He chose me to make the pictures for his first large publication, "Operative Gynecology." That was in 1894. I worked hard but with little success. Photography was called in to aid in holding the elusive steps in an operation, to produce a clinical picture or show a pathologic specimen. I was urged to accept the help of the camera and obediently did so for a while but soon abandoned its aid, realizing that mere copying of a medical object is really not medical illustrating at all, which, as every medical man knows, goes much deeper than that. Moreover, an artist feels degraded when he copies or uses a photograph as a basis for his drawing.

4. It was fortunate for me that Dr. Kelly was not only a kind and patient chief but also an excellent teacher. He could see that my ignorance in medical matters was a handicap to me. I felt sure that I could draw what I understood but found it exceedingly hard to plan a picture so that any one, even a layman, could understand it. It was difficult for me to select the most suitable view, to determine what to show and how to show it, what to emphasize and what to subdue or leave out. This is where I hesitated and wasted time, as every novice does. It was lucky for me that Dr. Kelly had the remarkable gift of explaining with sketches. In a few simple but graphic lines he could show all the new ideas in connection with his operative work. There is no question that Dr. Kelly's genius for visualization and for sketching paved the way for his illustrators. He made it clear that the conception of a picture is the all important thing, not the plastic elaboration, the realism or the technical finish.

5. Another lucky factor was that Dr. Kelly let me study while working for him. Few employers would permit that. They want pictures for their money. I dissected and injected the pelvic and abdominal organs many times. No drawing was made by me without original study by injection, dissection, frozen section or reconstruction. When variations in adult forms puzzled the eye, the study of embryology gave the key. Many embryos and fetuses were injected, dissected, sectioned and studied. Had these studies been made for me by some one else, in order to save time, I would have benefited little; the finished dissection, injection or reconstruction would still in part have been an enigma to me. The eye and hand must work together to obtain the priceless information that automatically crystallizes into a mental image, which is the forerunner of the subsequent picture on paper. There is no other way, at least for the beginner.

If the artist has thus made sure of his ground, his drawing shows it. It is a truer, bolder, better picture and is done with greater speed.

6. Dr. Kelly also permitted me to help other illustrators while still in his employ. He even encouraged this digression. This paved the way for subsequent teaching of professional illustrators, of art students, medical students and members of the faculty doing research work. There is no better way to learn a subject thoroughly than by teaching it to others. My first pupils, of course, were my friends Becker (1895) and Horn (1898), who came to assist me in the work for Dr. Kelly and his staff. I tried to teach them the fundamental principles of gynecologic illustrating but had little to give in those days. The job was not of my making; it was wished on me. The truth is, we learned together. I was rarely more than a jump or two ahead of them. Confession is good for the soul.

7. Thousands of pictures were made by the three of us to illustrate the various books and articles written by Dr. Kelly and his associates. Each book marked an advance in our method of approach and technic.

It should be stated here that Dr. Kelly also permitted us to make illustrations for other departments—those of anatomy, embryology, physiology, pathology, surgery with its many subdivisions and obstetrics. This outside work retarded our regular illustrating, but Dr. Kelly invariably presented the pictures to his colleagues. This unselfishness broadened my field and ultimately led to the creation of the art department in March 1911. When Dr. Kelly's work ceased, I was tempted to go elsewhere. But my roots were deep in the ground and I was loath to leave Johns Hopkins.

8. This is where my friend Dr. Thomas S. Cullen came in. He had other plans. He had faith in our work, ideals and technic and wanted to keep them at Johns Hopkins. His dream was to create an art department in which the methods and technic which we had evolved during the wonderful Kelly period could be handed down to new generations of medical illustrators and spare them the years of trials and disappointments of their self-taught predecessors.

It is a matter of record that Dr. Cullen did all this single handed. No one else could or would have done it. He succeeded in interesting Mr. Henry Walters in the creation and, later on, in the endowment of a department of "Art as Applied to Medicine" at Johns Hopkins University School of Medicine. Horn had died, Becker's health failed and I was left alone. So it became my privilege to organize and develop this school from 1911 until 1940, a period of thirty years, very happy years to me.

Three names will ever be linked with the Department of Art as Applied to Medicine at Johns Hopkins University School of Medicine:

Dr. Howard A. Kelly, the master surgeon under whom I learned the subject. He laid the foundation for the department.

Dr. Thomas S. Cullen, the man of vision and persistence, who planned it.

Mr. Henry Walters, the keen business man, lover of art and philanthropist, who generously endowed it.

My teaching days are over now. The university, following its custom, has retired me, but I still do the work I love in the department of surgery.

THE ART DEPARTMENT, 1911-1940

During the thirty years of its existence the art department has trained nearly two hundred medical illustrators, carefully chosen from thousands of applicants. There are no two alike. Each has his or her own individual style. I can nearly always tell who made the picture without seeing the signature.

Those who have taken the course are employed in the important medical schools and clinics of the United States and Canada. A few of them are abroad. Their work can be found in the medical literature, exhibits, hospital records, lantern slides and the like.

The size of the class varied from four to twenty-three regular students a year; the average was ten. Every year a few professional illustrators were admitted as postgraduate students for intensive study in a special branch, mostly technic. Members of the faculty and a limited number of medical students received instructions in drawing—the former as an aid in their research, the latter because of their interest in and their talent for drawing and its obvious benefit in the study of medicine.

The instructions of the regular art students, the beginners, were as follows:

Since no illustration can be made without anatomic and histologic knowledge, the student begins in the dissecting room, doing the work with his (or her) own hands, slowly and thoroughly. Because each student can have only a few bodies to study from, while the range of variations is legion, daily lectures and demonstrations accompany and augment the dissection. A large transparent ground-glass plate covers life size drawings of a skeleton, front, back and side views; also sections, properly coordinated. With charcoal and colored chalk these pictures can be altered before the student's eye to show variations in size, form and proportion due to sex, age or race; also physiologic, pathologic and postural changes, diseases and their course and operations; in brief, everything that concerns the illustrator. Each alteration requires only a few strokes, which are erased when the alteration is demonstrated and another type drawn—and so on.

While the student dissects and studies the skin, the ground-glass plate explains its phenomena in a multitude of variations. Then are taken up the bony landmarks, fat deposits, vessels, nerves, lymphatics and their variations and significance; muscles, tendons, ligaments and fasciae. Then come the internal organs, first in toto, then each organ separately with its variations and pathologic alterations.

Every structure and every organ is studied at the same time microscopically under low, medium and high power to give a complete picture.

The most important part of the student's work in the dissecting room, however, is sketching and drawing. Everything revealed by the student's eye and hand is put on paper immediately, while the impression is fresh. The sketches are made boldly and rapidly in black and colored crayons. Thousands of such sketches are made. They are the test that the student has grasped the subject.

They are valuable to him as forerunners of medical and surgical pictures. He has learned to study the subject in the form of pictures, not of words.

At the end of the year a recapitulation of the topography of the viscera is made by the study of frozen sections, sagittal and transverse.

Fresh material is employed, whenever necessary, to augment the studies on the cadaver and to correct postmortem phenomena, alterations of form, consistency and color.

Many accessory methods are used to teach the student the correct approach to a problem in illustrating. It is always done in the form of pictures, either on paper, on the ground-glass plate or on the blackboard; occasionally by graphic description, made alive by expressive gestures with the hands. Nearly every discussion terminates with a diagram; a question asked by an alert pupil may lead to the creation of a helpful topographic sketch, sometimes startling in its originality. It is a stimulating habit to show the beginning, course and end result of a disease in an eloquent diagram. The medical literature can use more such pictures.

The student must also learn to make accurate, realistic pictures of objects placed before him. He must know how to pose and illuminate them so that their plastic rendition is simplified.

Much time in the class is given to this part of the training. No artist can create a picture unless he has first learned to imitate nature. Many pictures are made of fresh or hardened specimens from an operation or an autopsy, and, most important of all, realistic pictures of operative steps.

Paralleling these studies are complete instructions in accurate draftsmanship and perfect technic. All important technics must be mastered in order to make the original drawing or painting acceptable to the author, to the engraver and to the publisher. Several new technics were worked out in this department and are taught to the students. The pen and ink technic is by far the most useful, because a line drawing costs less to reproduce and is not easily ruined by inferior presswork.

Being thus equipped, the student is ready independently to plan and make finished pictures for publication. After many failures a moderate degree of success may be attained; occasionally there is a gem, even a little masterpiece.

The superior work of a talented student is quickly noticed by instructor and fellow-students, then by members of the medical and surgical staffs and then by visiting physicians. The student is asked to make drawings for them, which may start him on his way to getting a job.

APPLICANTS

It is generally accepted that medical illustrating is an intricate, highly specialized form of art requiring for its mastery systematic full time study over a period of from two to four years or even longer, according to the talent, speed and preliminary training of the applicants.

They come from colleges, art schools and high schools. I have found that good material may come from any of these.

1. Some applicants are born artists with exquisite technic and a poetic temperament but entirely ignorant of the basic branches of medical science and for some reason quite unteachable.

2. Others have a college background with a fine grasp of the medical aspect of their studies but are awkward in drawing; their eyes and hands do not work together.

3. A rare group of applicants is gifted in science as well as in art.

4. The last group is without talent in either. The applicants of this group assert that they are fascinated by medicine and its dramatic service to humanity and want to help, but mere interest in the subject is not enough. However, there are even here notable exceptions.

The applicant may be a man or a woman. The best age is between 20 and 24.

The qualifications in order of their importance are:

1. Keen interest in science, in nature and in all living things.

2. Ability to study intelligently, to observe accurately and to doubt the statements of authority.

3. Ability to draw and paint from nature free hand and with artistic charm.

4. Ability to visualize, to imagine a picture based on previous study and then give it reality on paper, either in contour alone or with convincing plasticity.

5. Technical skill in drawing, a trustworthy eye guiding an obedient hand, preferably the right.

6. Ability to stick to a task with tenacity and to be resourceful in the face of obstacles.

7. Good general health and normal vision.

OPPORTUNITIES

When a student has shown that he can make a correct and technically perfect picture, some member of the medical profession is apt to discover him and seek his services. It is not the function of the instructor to find the niche into which he fits best.

While the important medical centers are now provided with the illustrators they need, there always seems to be room at the top. Institutions, clinics, research laboratories, hospitals, surgeons or groups of surgeons are usually interested in hearing of a new and promising artist. Vacancies occur in the ranks of medical illustrators through ill health, death, incompetence and other factors. These vacancies must be filled.

The following branches of medicine require illustrations: embryology, anthropology, anatomy (gross and microscopic), topographic anatomy applied to medicine and to surgery, clinical medicine and microscopy, pediatrics, pathology (gross and microscopic), psychiatry, research (such as on cancer), obstetrics, general surgery and its subdivisions neurosurgery, surgery of the eye, ear, nose, throat and chest, abdominal pelvic surgery (gynecology), genitourinary surgery (male and female) and orthopedic surgery.

An illustrator employed in one of these special fields might rightly be called a specialist, because of the limited range of his activity, and it might be stated that the training for a narrow field could be done in a relatively short time and that therefore a course of two or three years is unnecessarily long, a waste of valuable time. This, however, is not the case.

Every medical artist worthy of the name realizes that he has to know the entire human body and the entire field of medical illustrating before he can discover the branch for which his special talent and his chief interest and inclination fit him best. A medical student does the same and for the same reason.

Moreover, in many institutions an illustrator has to serve several departments and be prepared to draw all types of pictures in every known technic.

REMUNERATION

As every one knows, artists rarely make big money, and a medical illustrator is no exception. His work, if properly done, is an exceedingly important part of medical progress, teaching and dissemination of knowledge and should be adequately remunerated. In many instances, unfortunately, it is not.

It is as difficult to evaluate a fine medical drawing as a successful surgical operation. Is it worth as little as $10 or as much as $1,000? Who can say? A drawing is worth what the buyer is willing to pay. That seems to be the only answer. A drawing may look very simple but require a vast amount of thought and a great deal of preliminary study by a conscientious artist who cannot do slipshod work. On the other hand, it may look most elaborate and complex and yet permit of speedy completion.

If the artist is on a regular salary, the work is apt to be of higher quality. If he is paid by the hour or by the drawing, he is inclined to be superficial. There are many other factors causing fluctuations in price:

1. The cost of living where the work is being done.

2. The demands made by the artist because of habit, social status, age, sex.

3. Special gifts, such as originality of conception, exceptional thoroughness and technical skill, large experience, speed, endurance.

It must be admitted that at present it is somewhat difficult even for a talented pupil to find a job. The medical profession has troubles of its own, and many

FRESH COMPOUND FRACTURES

TREATMENT BY SULFANILAMIDE AND BY INTERNAL FIXATION OF METALLIC PINS

WILLIS C. CAMPBELL, M.D.
AND
RYAN SMITH, M.D.
MEMPHIS, TENN.

Preliminary reports of the treatment of compound fractures with sulfonamides and without metallic internal fixation and of a case with primary closure of the wound were couched in rather conservative terms. After three years of experience with this method, certain favorable impressions formed in the beginning can now be changed to fairly definite conclusions. The series subsequently to be reported is a representative one, series consisting of 50 private patients treated under optimum surgical conditions with adequate postoperative care and follow-up and 93 municipal hospital patients treated under less favorable conditions. The adoption of this method of treatment is sufficient indication that other methods previously utilized had not been entirely satisfactory.

In addition to the administration of sulfonamides and primary closure of the wound, metallic internal fixation has been utilized in 42 cases. While primary fixation in compound fractures has been used previously and satisfactory results have been reported by others, the safety and wider applicability of the method have been enhanced. The possible adverse effect on the percentage of primary healing by the introduction of foreign material into potentially infected wounds has been largely compensated by the local use of sulfanilamide. Improved metals for fixation, vitallium and stainless steel have been tolerated by the tissues to a much greater degree than the former highly electrolytic alloys. Vitallium was principally used after a thorough trial in open reductions of clean or closed fractures. In a smaller group, stainless steel wire, pins or nails were inserted with essentially the same degree of success.

Certainly not the least of treatments or procedures is nightly measured by the use of mental stress, the percentage of misfortune and suffering, even in the presence of infection or trauma, is reduced to a minimum. The clinical demonstration has validated, point by point, many of the lessons that controvert the advantages of the use of connection with compound fracture, widely accepted as theoretical objection. The chief advantage of internal fixation is in the fact that adequate immobilization with minimum movement can be secured and maintained without the impediment of cumbersome external fixation. Thereby the entire injured extremity can be adequately observed and treated without fear of displacing fragments and without further trauma to the damaged soft tissues by movement of the fragments. Further, these patients are more easily relieved immediately following the injury than at any time afterward. Accurate reduction unquestionably assures more. Obliteration of dead space and prevents angles at the ends of the bones diminishes the likelihood of infection.

No attempt has been made to standardize the treatment to use as routine for all compound fractures. For such a method to be practical, injuries would have to be standardized, i. e. the degree of laceration or contusion of soft tissues, the amount of extraneous matter in the wound and the like. Treatment accordingly has varied with the severity of the injury. Those fractures with wounds formed by penetration of the soft tissues from within by the bone fragments were regarded as mild. Fractures produced by rifle or revolver bullets were placed in this category. The group of moderate fractures was those in which the soft tissue wound was extensive but wherein little or no dirt or foreign material had been introduced. The third group of compound fractures, with extensive damage to the soft tissues, with gross contamination by foreign material and with devitalization or obvious necrosis of the soft tissues, was classed as severe fresh compound fractures.

In the treatment of compound fractures the patient's general condition is the primary consideration; on admission to the hospital, emergency measures are instituted to combat shock, hemorrhage and pain. The following points should be determined: the period of time that has elapsed since the fracture, whether the injury is compounded from the outside or has resulted from protrusion of the bones from within out, the extent of the wound, the type of fracture and the extent of injury to blood vessels, nerves, muscles and tendons.

Mild fractures are treated with a relative degree of conservatism. The field and the wound are thoroughly cleansed; a debridement limited to the superficial tissues is carried out, the wound closed and the fracture reduced and immobilized. The wound is not enlarged for the purpose of any extensive exploration or debridement of the depths of the wound. By so doing, additional organisms are introduced into the deep structures and those already present are disseminated.

Pistol shot fractures are treated as closed fractures unless an important tendon, nerve or vessel has been severed. Immediate exploration of the wound and removal of the bullet are more likely to invite infection than external fixation of the fracture followed by massive doses of sulfonamides.

In moderate or severe fractures, the preliminary cleansing process is carried out meticulously, the wound being irrigated and washed with from 4 to 5 quarts (liters) of saline solution. Surgical antiseptics are

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Dr. Campbell died May 8, 1941.

Read before the Joint meeting of the Section on Surgery, General and Abdominal, and the Section on Orthopedic Surgery at the Ninety-Second Annual Session of the American Medical Association, Cleveland, June 6, 1941.

applied only to the skin. Strong antiseptics or caustic solutions in the wound coagulate the proteins and cause necrosis of the superficial tissues, thus inviting rather than inhibiting infection. After application of surgical drapes, the wound is enlarged sufficiently for a thorough exploration of the entire wound. After a complete débridement, the irrigation of the wound is carried out again so as to expedite further removal of all foreign material. We are not laboring under the misapprehension or delusion that a sterile wound is the result of the most painstaking execution of this procedure. Rather, we hope to reduce the bacteria, foreign material and necrotic tissue to such a minimum that the natural defense mechanism of the remaining viable tissues, plus sulfonamides locally, will be adequate to prevent an infection.

Complete hemostasis is secured, restricting the use of ligatures to a minimum. Loose particles of bone are left in situ, since large defects between the fragments impede the progress of union. Small particles, with their periosteum and soft tissue attachments intact, may serve as small grafts and possibly stimulate osteogenesis. Fragments of bone covered with foreign material such as grease or dirt, which cannot be thoroughly cleansed, are an exception to this rule. Metallic internal fixation is applied without hesitancy if it is indicated. From 5 to 20 Gm. of sulfanilamide crystals is then placed in the wound and carefully distributed throughout the entire extent of the wound. In deep and extensive wounds, a few interrupted approximating catgut sutures are used in the deep structures, the skin being loosely approximated with silk. Only under the following circumstances is the wound packed open with petrolatum gauze: (1) when the wound is of more than twelve hours' duration; (2) when the soft tissues have been so extensively mangled that closure of the skin is impossible; (3) when a complete débridement of the devitalized tissues or the thorough removal of all foreign material is impossible, as in a shotgun wound of a fleshy part.

During the latter part of this series we have used sulfathiazole by mouth postoperatively as soon as the nausea ceases, in doses of 1 Gm. every four hours. The use of sulfanilamide locally in the wound, followed by sulfathiazole by mouth, seems to be the most efficient and desirable combination of sulfonamides that we have tried. No deleterious effects, either to the soft tissues or to the bone, have been noted when sulfanilamide was placed in the wound. In only 1 patient have any serious effects been noted as a result of the use of sulfonamides. In this patient, who had received 39 Gm. of sulfanilamide, bilateral staghorn renal calculi developed that terminated in a fatal pyonephrosis.

TABLE 1.—*Results of Treatment in Two Hundred and Eighteen Fresh Compound Fractures*

Sulfonamide Therapy			No Sulfonamide Therapy		
	Number	Per Cent		Number	Per Cent
Not infected	117	81.8	Not infected	50	66.6
Union	97		Union	43	
Nonunion	9		Nonunion	5	
Incomplete	11		Incomplete	2	
Infected	26	18.1	Infected	25	33.3
Union	13		Union	13	
Nonunion	5		Nonunion	4	
Osteomyelitis	(12)		Osteomyelitis	(8)	
Amputation for gas gangrene	4		Amputation for gas gangrene	3	
Patient died	2*		Patient died	3†	
Incomplete	2		Incomplete	2	

* One patient died of gas gangrene following a shotgun wound of the ilium and abdomen and one of septicemia and bacterial endocarditis.
† Two patients died of gas gangrene and one of streptococcic septicemia.

TABLE 2.—*Results of Treatment with Sulfonamides in Mild, Moderate and Severe Fresh Compound Fractures*

	Mild Fractures		Moderate Fractures		Severe Fractures	
	Internal Fixation	No Internal Fixation	Internal Fixation	No Internal Fixation	Internal Fixation	No Internal Fixation
Not infected	1	49	10	29	16	12
Union	1	46	7	25	9	9
Nonunion	0	0	2	1	4	2
Incomplete	0	3	1	3	3	1
Infected	1	0	2	1	12	10
Union	1	0	0	0	7	5
Nonunion	0	0	2	0	3	0
Amputation	0	0	0	0	(3)	(4)
Gas gangrene	0	0	0	0	2	2
Osteomyelitis	(1)	0	0	0	(7)	(4)
Patient died	0	0	0	0	0	2
Incomplete	0	0	0	1	0	1

From statistical studies, patients who received sulfonamides both locally and by mouth had approximately the same percentage of infection as those who received the drug only by mouth. Despite this, we expect to continue the use of sulfonamides locally; obviously, the greatest concentration in the wound at the earliest possible moment should have a great theoretical advantage in preventing the propagation of bacteria, thereby allowing the natural defense mechanisms to dispense with the remainder. On the contrary, if bacteria have penetrated deeply and an infection is already established before an adequate blood concentration can be built up by mouth, the sulfonamides cannot properly exercise their bacteriostatic and prophylactic effects. The subcutaneous or rectal administration of sulfonamides during the postoperative period of nausea has been discontinued entirely, as the amount of drugs introduced is so small as not to warrant the effort.

In order to evaluate the results of sulfonamide therapy, a comparative analysis was made between the present group of 143 cases and a consecutive series of 75 compound fractures in which neither internal fixation nor the sulfonamides was used. The results of this study are summarized in table 1. There was approximately the same percentage of union and nonunion, and the average time required for union in the two groups was approximately the same. Primary closure of the wound, in conjunction with sulfonamide therapy, certainly did not increase the incidence of gas gangrene,

TABLE 3.—*End Results of Gunshot Fractures*

Pistol and revolver shot fractures	
Infected	1
Not infected	27
Shotgun fractures	
Healed by primary intention	2
Gas gangrene	2
Pyogenic infection	4

institutions employing artists are in financial difficulties, but better days will come in due time and with them, I hope, better times for the medical illustrator.

An underpaid artist may find solace in the thought that he does something eminently worth while for the medical profession and, incidentally, also for mankind. He is on the "firing line" of medical progress and should consider it a privilege to be associated with the keenest minds in medicine, the original thinkers, sharing their labors, their hopes and doubts and their ultimate triumphs. And, as I said before, adequate reward usually comes their way in the end. I can assure the beginner that medical illustrating is a fascinating branch of applied art, full of intense interest in all its phases. There is far more satisfaction, I think, in producing a perfect picture which advances medical knowledge—no matter how little—than there is in painting a picture in the modern manner which no man would care to own and which in the last analysis is of doubtful value to mankind in these troublous times.

FRESH COMPOUND FRACTURES

TREATMENT BY SULFONAMIDES AND BY INTERNAL FIXATION IN SELECTED CASES

WILLIS C. CAMPBELL, M.D.
AND
HUGH SMITH, M.D.
MEMPHIS, TENN.

Preliminary reports of the treatment of compound fractures with sulfonamides with or without metallic internal fixation, and as a rule with primary closure of the wound, were couched in rather conservative terms. After three years of experience with this method, certain favorable impressions deduced in the beginning can now be changed to fairly definite conclusions. The series subsequently to be reported is a representative cross section consisting of 50 private patients treated under optimum surgical conditions with adequate postoperative care and follow-up and 93 municipal hospital patients treated under less favorable conditions. The adoption of this method of treatment is sufficient indication that other routines previously utilized had not been entirely satisfactory.

In addition to the administration of sulfonamides and primary closure of the wound, metallic internal fixation has been utilized in 42 cases. While primary fixation in compound fractures has been used previously and satisfactory results have been reported by others, the safety and wider applicability of the method have been enhanced. The possible adverse effect on the percentage of primary healing by the introduction of foreign material into potentially infected wounds has been largely compensated by the local use of sulfanilamide. Improved metals for fixation, vitallium and stainless steel have been tolerated by the tissues to a much greater degree than the former highly electrolytic alloys. Vitallium was principally used after a thorough trial in open reductions of clean or closed fractures. In a smaller group, stainless steel wire, pins or nails were inserted with essentially the same degree of success.

Dr. Campbell died May 4, 1941.

Read before the joint meeting of the Section on Surgery, General and Abdominal, and the Section on Orthopedic Surgery at the Ninety-Second Annual Session of the American Medical Association, Cleveland, June 6, 1941.

Granting that the risk of nonunion or infection is slightly enhanced by the use of internal fixation, the percentage of malposition and shortening, even in the presence of infection or nonunion, is reduced to a minimum. The clinical demonstration that vitallium plates are relatively inert in the tissues has convinced us that the advantages of its use in connection with compound fractures usually outweigh any theoretical objection. The chief advantage of internal fixation lies in the fact that absolute immobilization with anatomic alinement can be secured and maintained without the impediment of cumbersome external fixation. Thereby, the entire injured extremity can be adequately observed and treated without fear of displacing fragments and without further trauma to the damaged soft tissues by movement of the fragments. Further, these fractures are more easily reduced immediately following the injury than at any time afterward. Accurate reduction unquestionably hastens union. Obliteration of dead space and pockets about the ends of the bones diminishes the likelihood of infection.

No attempt has been made to standardize the treatment to one set routine for all compound fractures. For such a method to be practical, injuries would have to be standardized, i. e. the degree of laceration or maceration of soft tissues, the amount of extraneous matter in the wound and the like. Treatment accordingly has varied with the severity of the injury. Those fractures with wounds formed by penetration of the soft tissues from within by the bone fragments were regarded as mild. Fractures produced by rifle or revolver bullets were placed in this category. The group of moderate fractures was those in which the soft tissue wound was extensive but wherein little or no dirt or foreign material had been introduced. The third group of compound fractures, with extensive damage to the soft tissues, with gross contamination by foreign material and with devitalization or obvious imminent necrosis of the soft tissues, was classed as severe fresh compound fractures.

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Amputation for gas gangrene	4		Amputation for gas gangrene	3	
Patient died	2*		Patient died	3†	
Incomplete	2		Incomplete	2	

* One patient died of gas gangrene following a shotgun wound of the ilium and abdomen and one of septicemia and bacterial endocarditis.
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From statistical studies, patients who received sulfonamides both locally and by mouth had approximately the same percentage of infection as those who received the drug only by mouth. Despite this, we expect to continue the use of sulfonamides locally; obviously, the greatest concentration in the wound at the earliest possible moment should have a great theoretical advantage in preventing the propagation of bacteria, thereby allowing the natural defense mechanisms to dispense with the remainder. On the contrary, if bacteria have penetrated deeply and an infection is already established before an adequate blood concentration can be built up by mouth, the sulfonamides cannot properly exercise their bacteriostatic and prophylactic effects. The subcutaneous or rectal administration of sulfonamides during the postoperative period of nausea has been discontinued entirely, as the amount of drugs introduced is so small as not to warrant the effort.

In order to evaluate the results of sulfonamide therapy, a comparative analysis was made between the present group of 143 cases and a consecutive series of 75 compound fractures in which neither internal fixation nor the sulfonamides was used. The results of this study are summarized in table 1. There was approximately the same percentage of union and nonunion, and the average time required for union in the two groups was approximately the same. Primary closure of the wound, in conjunction with sulfonamide therapy, certainly did not increase the incidence of gas gangrene,

TABLE 3.—*End Results of Gunshot Fractures*

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Gas gangrene	2
Pyogenic infection	4

nor was there a sufficiently striking decrease in the incidence of gas gangrene to indicate a particularly beneficial effect of the sulfonamides on the gas producing organisms. Of the 5 patients with gas gangrene, 4 lived following amputation; in the other gas gangrene developed following a shotgun wound of the ilium and abdomen, and the patient died.

The incidence of infection was reduced from 33.3 per cent to 18.1 per cent. Only 2 of 143 patients who received sulfonamides died from infection, as compared with 3 in the control series of 75.

Since the possibility of infection in a fresh compound fracture is commensurate with the degree of laceration and maceration of the soft tissues, the 143 fresh compound fractures were further analyzed as mild, moderate or severe (table 2). Prior to the use of sulfonamides, one could reasonably expect healing of the wound without infection in a mild type of compound fracture in a high percentage of cases. Consequently, only 1 infection occurring in 51 mild compound fractures is not considered as conclusive evidence of any beneficial prophylactic value of sulfonamides.

Included in this series of 51 mild fractures were 28 pistol or revolver shot fractures. Twenty-seven of these healed without infection.

Further analysis will be limited entirely to the 92 moderate and severe compound fractures. In this group, 40 patients had internal fixation with 14 infections and 11 nonunions. In the group of 52 with no internal fixation, infection occurred in 11 and in 3 nonunion persisted. These statistics exaggerate the possible theoretical adverse effects of metallic fixation on healing of the soft tissues and the bone, as internal fixation was employed in a group of severe fractures in which a high percentage of infections and nonunions could be expected. There was little difference in the average period of union between those with and those without fixation.

Better anatomic and functional results have been secured by internal fixation in conjunction with sulfonamides. Certainly the 117 patients whose wounds healed following primary closure are in a better residual status than if the wounds had been packed with petrolatum gauze and had healed secondarily with an extensive permanent scar. Even in the 26 cases which became infected, infection could not be considered as severe as compared with the infections prior to the use of sulfonamides. Most of the cases listed as becoming infected did not run a febrile course; nor were there copious quantities of purulent material exuding from the wounds for weeks, associated with emaciation, anemia and sepsis, which would previously have been anticipated. It was also striking that drainage was not as persistent and that wounds in infected cases healed in a much shorter period than one would expect.

We acknowledge the fact that, prior to the use of sulfonamides, thorough mechanical cleansing of wounds and primary closure may have given many good results, but the procedure also eventuated in many acute fulminating infections and disastrous sequelae. Sulfonamides by mouth and in the wound, in conjunction with a meticulous mechanical cleansing and débridement, have definitely broadened the applicability of internal fixation and primary closure to embrace a large group of compound fractures with a commensurate improvement in end results.

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ABSTRACT OF DISCUSSION

DR. HAROLD R. BOHLMAN, Baltimore: I wish to emphasize a few points in connection with this excellent paper. First, the treatment of shock in these cases and the use of local anesthesia, nerve block or spinal anesthesia to lessen shock. Second, thorough wound toilet with copious lavage, as the authors mention, with removal of all foreign material. Third, the matter of débridement. This word is the most loosely used term in surgery today. How much tissue should be cut away? "Complete débridement" indicates the removal of all traumatized tissue. Too often the surgeon's scalpel does more damage than has the trauma. In a fresh wound how can the surgeon determine with his eye how much tissue to cut away, how much has been actually devitalized? I have treated some 12 patients, derelicts of the streets and alleys, individuals of the poorest class, the poorest risks, without any sterilizing solution on the skin or in the wound, no iodine, no washing, simply reducing the fractures without even washing my hands, putting on a posterior splint, with petrolatum gauze over the wound; raising the blood level of sulfanilamide to 10 mg. per hundred cubic centimeters at once and holding it there; transfusing, if necessary. These wounds have all healed without infections. In some of them we recovered staphylococcus gas bacilli of one type or another, but not a single case of gas gangrene resulted. In many instances in which the skin was greatly macerated it served as a bridge and but little scarring resulted. Fourth, one should make incisions through the fascial planes to avoid internal tension. They should always be longitudinal in the extremities, should open contaminated fascial compartments. Fifth, gas gangrene is a disease of occluded circulation. One must consider the basic circulation in estimating a wound. If it is gone there is no choice but to amputate. Integrity of arterial venous and capillary circulation is necessary. If the slightest pressure occludes the latter and clostridium spores are present in injured tissue, gas gangrene will surely result. Tension must be considered at all times. It must be avoided, whether internal or external, caused by sutures, dressings, casts, petrolatum packs, swelling or by the method of fixation. Sixth, sulfa drugs must be carefully checked and blood transfusions resorted to whenever necessary. In Johns Hopkins since we have been using sulfanilamide prophylaxis in traumatic wounds we have not had a single death since the fall of 1937.

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mind about other forms of treatment that may be introduced subsequently, but for the present in civil practice this method has given a better percentage of good results than we previously had. I am willing to say now that if an as carefully analyzed series as this is presented for any other form of treatment I will gladly change. Summing up the treatment, for compound fractures conservatism, for pistol and revolver shot fractures conservatism, for moderate and severe fractures exploration, débridement, sulfanilamide in the wound, fixation if indicated, and closure of the wound, petrolatum-pack drainage or, if one prefers, Orr or Carrel-Dakin methods when thorough débridement is impossible or when closure without extensive tension is impossible because of mangling of soft tissues.

THE INFLUENCE OF EXPECTORANTS AND GASES

ON SPUTUM AND THE MUCOUS MEMBRANES OF THE TRACHEOBRONCHIAL TREE

PAUL HOLINGER, M.D.
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The treatment of pulmonary or bronchial suppuration is a frequent task of the otolaryngologist who devotes a portion of his time to bronchology. His efforts in this field are identical to his efforts in the treatment of suppurative sinus disease, where they are directed toward restoring the normal physiologic function through establishing and maintaining adequate drainage. The mechanical drainage of the pathologic secretions in the bronchi is accomplished by the action of the cilia, the respiratory movements, the tussive squeeze of the cough reflex, the cough itself and, finally, expectoration. This drainage depends to a large degree on the liquefaction of these secretions by the action of the glands of the more normal bronchial mucosa. That these processes, both the cellular activity and the more gross mechanical ones, may be immeasurably aided by expectorants, by postural drainage and by bronchoscopic suction is well recognized. Means of increasing the efficiency of these measures are readily available; an evaluation of their actions, suggestions regarding their use and new methods which may be employed are herein presented.

The most commonly used means of increasing endobronchial drainage at the present time consist in the administration of one or more of a multitude of expectorant drugs and the age old use of steam inhalations. That these agents are of significance in laryngology and bronchology is apparent from a review of the recent otolaryngologic literature dealing with such subjects as acute laryngotracheobronchitis, bronchiectasis and postoperative massive collapse of the lung. But while they stand the test of clinical trial in a general way, their use is to a large degree empirical. Consequently, to determine the mode and site of action of these widely used therapeutic agents, studies regarding the physiology of bronchial secretions and expectoration were undertaken. These studies, reported in detail elsewhere,[1] consisted in physical and chemical analyses of sputum obtained from patients with mild or low grade bronchiectasis. These patients, having a moderately productive cough, were selected because sputum, in any measurable quantity, is a pathologic product and does not exist in a manner in which it can be collected for experimental study in normal individuals. Advanced cases of pulmonary suppuration were not used. By means of postural drainage and bronchoscopic suction, sputum from various parts or levels of the tracheobronchial tree could be obtained and studied independently. It was found that sputum undergoes a series of changes in its course through the bronchi. In the most dependent bronchi its viscosity was found to be greatest. As it advances from these recesses by the tussive squeeze, secretory pressure and respiratory movements to the larger bronchi, it becomes thinner through actual dilution and may be coughed out. The physiology of this process of dilution need not be discussed here. However, it is essential that it be aided to permit adequate, prompt and continuous drainage, because an analysis of the extremely viscous mucopus found in the deepest portions of the bronchial tree suggests that this material plays an extremely important role in the development of bronchopulmonary suppuration. Its presence is confirmed daily in bronchoscopic clinics, and it is discussed in detail by the Jacksons [2] in their observations on bronchiectatic patients. It is obtainable only through bronchoscopic suction, remaining in the bronchi even after thorough postural drainage. This was graphically demonstrated by serial roentgenograms of the chest of a boy with a saccular bronchiectasis of the right lower lobe. These films were taken before and after postural drainage and then following bronchoscopic aspiration. Anteroposterior and right lateral films of the chest before and after thorough postural drainage showed no change in the radiolucency of the area of bronchiectasis. He was then drained bronchoscopically and a large quantity of this thick pus obtained. A third roentgenogram, taken with the same technic, then showed the areas of radiolucency typical of the disease.

These observations, in a measure, stress the importance of the role which bronchoscopic aspiration plays in the management of bronchopulmonary suppuration. Stagnation of the viscid mucus in the terminal bronchi is in part responsible for the bronchial obstruction leading to the destructive changes which take place in the mucosa of the bronchi to produce bronchiectasis. Unaided, the physiologic process of dilution of secretions, so essential to spontaneous pulmonary drainage, is an extremely slow one. Consequently, a study of the influence of various agents on the bronchial secretions and bronchial mucosa was a logical sequence to the physiologic experiments just mentioned. The pharmacologic actions of expectorant drugs, steam and gases were evaluated by noting their effect on the viscosity, the p_H and the chemical content of the sputum in the major bronchi and on that in the dependent, terminal bronchi, as well as their effect on the mucosa.[3] The well known clinical fact that the expectorant drugs and steam lowered the viscosity of expectorated sputum

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nor was there a sufficiently striking decrease in the incidence of gas gangrene to indicate a particularly beneficial effect of the sulfonamides on the gas producing organisms. Of the 5 patients with gas gangrene, 4 lived following amputation; in the other gas gangrene developed following a shotgun wound of the ilium and abdomen, and the patient died.

The incidence of infection was reduced from 33.3 per cent to 18.1 per cent. Only 2 of 143 patients who received sulfonamides died from infection, as compared with 3 in the control series of 75.

Since the possibility of infection in a fresh compound fracture is commensurate with the degree of laceration and maceration of the soft tissues, the 143 fresh compound fractures were further analyzed as mild, moderate or severe (table 2). Prior to the use of sulfonamides, one could reasonably expect healing of the wound without infection in a mild type of compound fracture in a high percentage of cases. Consequently, only 1 infection occurring in 51 mild compound fractures is not considered as conclusive evidence of any beneficial prophylactic value of sulfonamides.

Included in this series of 51 mild fractures were 28 pistol or revolver shot fractures. Twenty-seven of these healed without infection.

Further analysis will be limited entirely to the 92 moderate and severe compound fractures. In this group, 40 patients had internal fixation with 14 infections and 11 nonunions. In the group of 52 with no internal fixation, infection occurred in 11 and in 3 nonunion persisted. These statistics exaggerate the possible theoretical adverse effects of metallic fixation on healing of the soft tissues and the bone, as internal fixation was employed in a group of severe fractures in which a high percentage of infections and nonunions could be expected. There was little difference in the average period of union between those with and those without fixation.

Better anatomic and functional results have been secured by internal fixation in conjunction with sulfonamides. Certainly the 117 patients whose wounds healed following primary closure are in a better residual status than if the wounds had been packed with petrolatum gauze and had healed secondarily with an extensive permanent scar. Even in the 26 cases which became infected, infection could not be considered as severe as compared with the infections prior to the use of sulfonamides. Most of the cases listed as becoming infected did not run a febrile course; nor were there copious quantities of purulent material exuding from the wounds for weeks, associated with emaciation, anemia and sepsis, which would previously have been anticipated. It was also striking that drainage was not as persistent and that wounds in infected cases healed in a much shorter period than one would expect.

We acknowledge the fact that, prior to the use of sulfonamides, thorough mechanical cleansing of wounds and primary closure may have given many good results, but the procedure also eventuated in many acute fulminating infections and disastrous sequelae. Sulfonamides by mouth and in the wound, in conjunction with a meticulous mechanical cleansing and débridement, have definitely broadened the applicability of internal fixation and primary closure to embrace a large group of compound fractures with a commensurate improvement in end results.

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These observations, in a measure, stress the importance of the role which bronchoscopic aspiration plays in the management of bronchopulmonary suppuration. Stagnation of the viscid mucus in the terminal bronchi is in part responsible for the bronchial obstruction leading to the destructive changes which take place in the mucosa of the bronchi to produce bronchiectasis. Unaided, the physiologic process of dilution of secretions, so essential to spontaneous pulmonary drainage, is an extremely slow one. Consequently, a study of the influence of various agents on the bronchial secretions and bronchial mucosa was a logical sequence to the physiologic experiments just mentioned. The pharmacologic actions of expectorant drugs, steam and gases were evaluated by noting their effect on the viscosity, the p_H and the chemical content of the sputum in the major bronchi and on that in the dependent, terminal bronchi, as well as their effect on the mucosa.[3] The well known clinical fact that the expectorant drugs and steam lowered the viscosity of expectorated sputum

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was confirmed. However, it was repeatedly found that the most dependent secretions, responsible largely for the destructive changes associated with their presence in the lower bronchi,[4] were not influenced physically or chemically by these agents.

The manner in which these findings influence various obstructive laryngeal or bronchopulmonary suppurative processes is important in their clinical management. Attention may first be directed to laryngotracheobronchitis because it has been discussed from other angles frequently before this group. As has been pointed out by Richards,[5] Gittens,[6] the Jacksons,[7] Brennemann, Clifton, Frank and Holinger,[8] the obstructive element in this disease is not alone the inflammatory edema but the secretions and products of inflammation which adhere to the laryngeal and bronchial surfaces. The efficiency of an atmosphere containing a high relative humidity as an expectorant was strikingly apparent in the results of the experiments just described. However, when steam alone is used to attain the desired humidity the temperature of the room, or the croup tent if the child is confined under a closely guarded crib covered with sheets, becomes unbearable and oppressive. The use of a room saturated with moisture produced by a mechanical humidifier was found to be more efficient than one in which steam was used.[9] Certainly in such an atmosphere expectoration became more efficient.

A second clinical application of this problem is associated with the management of postoperative collapse of the lung. This complication, formerly considered to be a postoperative pneumonia, is now recognized as a distinct clinical entity produced as, Gairdner [10] suspected in 1850, by viscid, inspissated mucus acting as a bronchial plug to obstruct a major bronchus. Its prompt relief by the removal of secretions from the bronchus has been demonstrated innumerable times by all endoscopists. Analysis of this obstructing secretion shows it to have an extremely high measured viscosity which accounts, in part, for the failure of the high normal processes to eliminate it from the bronchi. While bronchoscopic suction is reserved for the advanced stages of this disease, carbon dioxide and other means of increasing both the rate and the depth of respiration have been employed for a number of years by anesthesiologists in removing obstructing secretions and in improving the ventilation of the lung, both before or, if necessary, after bronchoscopy. Even in a prophylactic manner, many surgical clinics use carbon dioxide routinely following anesthesia to aid in preventing postoperative pulmonary complications. Consequently, a study of the influence of this gas on the bronchial mucosa and on secretions seemed indicated. Again using patients with low grade bronchiectasis, carbon dioxide was administered by mask at varying intervals prior to a bronchoscopic examination. Following the administration of this gas it was noted that the patients consistently had less secretion in their bronchi than they had had without carbon dioxide in spite of the fact that they had not coughed up appreciable quantities. It was also noted that the measured viscosity of this secretion was constantly lower than it had been when carbon dioxide was not used and that there was practically none of the extremely viscid secretion previously noted in the most dependent bronchi. An analysis of the sputum obtained following the use of carbon dioxide demonstrated that an actual dilution had taken place. This was further confirmed by the fact that, together with a lowering of the viscosity of the most dependent, aspirated sputum there was a reduction in its organic and inorganic content. This had not been accomplished either with steam or with the expectorant drugs.

The changes in the character of the mucosa were likewise striking. A definite hyperemia of the bronchial mucosa which was more than "normal" for these areas was noted in the parts of the lung involved in the pathologic process. It was significant that this hyperemia did not involve other parts of the air passages in which the mucosa was normal.

Thus, in a sense, carbon dioxide may be considered as an extremely efficient expectorant. It alone reaches the deeper, very obstructive type of secretion which must be frequently and efficiently drained to prevent serious types of permanent pulmonary or bronchial damage. It is apparent that the action of carbon dioxide is in part dependent on its ability to stimulate an actual resorption of secretions. However, its most important actions are to enforce deeper, more active respiratory movements as well as to liquefy the sputum and stimulate the cough reflex. By evacuating the more dependent bronchi, sputum otherwise inert is brought to a level from which it can be coughed out easily or removed more efficiently by direct suction through the bronchoscope.

The use of carbon dioxide as an expectorant suggests a new and wider therapeutic use for this gas. The following three cases illustrate this action:

O. B., a girl aged 11 years, was admitted to the Children's Memorial Hospital acutely dyspneic and cyanotic. Dyspnea had begun two weeks previously following removal of nasal polyps and was associated with a constant, nonproductive cough. Physical examination demonstrated definite dulness on both sides of the chest and many fine and coarse, bubbling rales throughout. Roentgen ray examination showed an extensive bilateral infiltration extending from the hilus, the most severe involvement being over the middle lobe, which was completely atelectatic. A diagnosis of bronchial asthma, complicated by obstructive pulmonary suppuration, was made. Her cyanosis was relieved by oxygen, but the dyspnea and nonproductive cough continued. Large doses of ammonium chloride and iodides were given, but her cough did not become productive. Thick mucopus was removed by bronchoscopic aspiration, but postural drainage was unsuccessful. The use of carbon dioxide inhalations by mask finally liquefied the secretions shortly after this therapy was instituted and for the first time the child expectorated easily on postural drainage. The removal of secretions bronchoscopically was likewise facilitated. Her improvement has been steady and her chest roentgenograms have shown progressive clearing.

R. J., a boy aged 4 years, had had numerous upper respiratory infections, attacks of bronchopneumonia and asthmatic attacks throughout his life. For the year and a half prior to admission to the Children's Memorial Hospital he had had a productive cough, gradually increasing dyspnea and occasional attacks of cyanosis. Physical examination showed a

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7. Jackson, Chevalier, and Jackson, Chevalier L.: Acute Laryngotracheobronchitis, J. A. M. A. **107**: 929-932 (Sept. 19) 1936; Acute Laryngotracheobronchitis: Bronchoscopy, Esophagoscopy and Gastroscopy, Philadelphia, W. B. Saunders Company, 1934, p. 311.

8. Brennemann, Joseph; Clifton, Willie Mae; Frank, Albert, and Holinger, Paul: Acute Laryngotracheobronchitis, Am. J. Dis. Child. **55**: 667-693 (April) 1938.

9. Eimerman, Miss Lucille: Nursing Care of Laryngotracheobronchitis at Children's Memorial Hospital, Hosp. Management **47**: 35 (March) 1939.

10. Gairdner, W. T.: On the Pathological State of the Lung Connected with Bronchitis and Bronchial Obstruction, Month. J. M. Sc. **11**: 122-138, 230-246, 1850.

slight, undernourished child who was somewhat barrel chested, dyspneic, and on the slightest exertion had some intercostal indrawing. Many bubbling, moist rales were heard over the entire chest. The heart was essentially normal considering the advanced pulmonary involvement. Bronchoscopic drainage was instituted and large quantities of extremely thick, viscid pus were repeatedly aspirated, but he failed to cough it up spontaneously. Because of the high viscosity of the pus present in the trachea and bronchi, first steam and later steam and carbon dioxide inhalations were administered as often as six times a day. Following these administrations he could raise sputum spontaneously during postural drainage. His sputum was definitely thinner. The attacks of cyanosis became fewer in number, and finally there was a decrease in the amount of sputum. It should be mentioned that the use of carbon dioxide in this manner is not contraindicated by attacks of cyanosis unless the cardiac reserve has been greatly diminished. The precaution of limiting its administration to short periods of time in extreme cases should be observed. An expectorant drug, fluid extract of senega, was likewise given.

H. H., a medical resident, sought relief of a dry, unproductive cough which had been present several weeks. He had had no result from the usual expectorants and was unable to raise secretion satisfactorily, which apparently was producing his irritating cough. Mirror examination of the larynx showed a chronically inflamed mucosa. The chest roentgenogram showed a very slight peribronchial infiltration, and the physical examination revealed a few scattered rales in the bases of both lungs. Carbon dioxide inhalations were administered four to five times a day by means of a mask held close to the face for periods of five minutes. Following the first administration he raised a moderate amount of viscid, grayish mucus. Throughout that and the succeeding day expectoration became regular and the material less viscid. It ceased after the third day, and the cough disappeared entirely.

Reviewing in brief the action of carbon dioxide in these three cases, it will be noted that prior to the administration of carbon dioxide even the strongest efforts of the patients to raise obstructing secretions were unsuccessful. The dilution of the secretions and their spontaneous expectoration began only after the carbon dioxide was administered.

Because of the frequent and widespread therapeutic use of oxygen, studies similar to those made regarding the action of carbon dioxide seemed indicated. Physical and chemical changes in the sputum following its administration and bronchoscopic observations of the mucous membranes of the trachea and bronchi were noted. Oxygen was administered by mask or by means of a nasal catheter. Examination of expectorated sputum following various periods of oxygen administration showed an increase in the viscosity of the sputum as well as an increase in its content of organic and inorganic substances. The extent to which these factors had been increased suggested that the action of oxygen had been one of concentration of the sputum. This was confirmed by the bronchoscopic picture. The tracheobronchial mucosa was pale or even blanched in appearance following oxygen administration, and the measured viscosity of aspirated mucus had decidedly increased over the usual measured viscosity of the aspirated mucus of the same patient without oxygen. A clinically important observation was the adherence of plaques of mucus to the bronchial walls, an observation never noted on the same patients without oxygen inhalations. Efforts were made to neutralize this undesired effect of oxygen on mucosa and sputum by the addition of 5 per cent carbon dioxide or steam inhalations administered in conjunction with the oxygen therapy. It was not possible to change the qualities of the sputum with either of these agents alone; only by combining oxygen with carbon dioxide and steam could this effect be neutralized. Further studies must be made to determine whether higher concentrations of carbon dioxide alone would be as efficient as the combination of steam and 5 per cent carbon dioxide.

These findings become especially significant in the management of obstructive laryngeal diseases as well as in the routine administration of oxygen. As Davison [11] pointed out, the use of an oxygen tent in the treatment of laryngeal obstruction complicating laryngotracheobronchitis may defeat the purpose of the oxygen by creating even greater obstruction through the desiccating action of oxygen. To alleviate this, he has provided mechanical humidification for his oxygen tents and has accomplished the desired result in significantly reducing the mortality in his series of cases.[12]

Thus, in a sense, steam or humidification and carbon dioxide may definitely be considered as expectorants of great efficiency, and oxygen an antiexpectorant. Certain drugs, most notably codeine and atropine, fall into this second classification of antiexpectorants as demonstrated experimentally, the former by an increasing, cumulative effect when the drug is repeated daily, the latter by inhibiting secretions for a short time following its administration.

CONCLUSIONS

A certain rationalization of therapeutic procedures used in the management of bronchopulmonary suppurations and obstructions may be suggested to coincide with the bronchoscopic observations and a study of the effect of therapeutic agents on sputum.

In general, it may be stated that factors responsible for liquefying sputum within the bronchi, thus aiding in its evacuation, consist of those agents which will increase the hyperemia of the mucosa, as well as those which will increase the rate and depth of respiration.

The action of the expectorant drugs is almost uniformly favorable in liquefying a portion of the sputum which lies in the first and second division bronchi but rarely affects the dependent viscid secretions in the peripheral bronchi.

The actions of gas inhalations are quite specific, and they grossly influence the physical and chemical qualities of both the expectorated and the bronchoscopically obtainable sputum as well as the character of the bronchial mucosa. Steam inhalation, or the inhalation of a high humidity atmosphere, results in the liquefaction of sputum. Carbon dioxide has an action quite similar to that of steam, but to a greater degree. And, in addition, it increases the resorbing power of the bronchial mucosa; consequently it may be considered an extremely efficient expectorant.

Oxygen acts very specifically as an antiexpectorant and therefore its use alone is contraindicated in obstructive lesions whose obstruction is in part, at least, due to copious, viscid secretions. This deleterious effect may be neutralized partially or wholly through the addition of steam and 5 to 10 per cent carbon dioxide. In this manner not only the tremendous value of oxygen in alleviating the symptoms of respiratory embarrassment or even respiratory decompensation is retained, but also necessary aid in removing the obstruction is administered.

The use of codeine and atropine at regular intervals over long periods of time is contraindicated in

11. Davison, F. W.: Some Observations on the Control of Temperature and Humidity in Oxygen Tents, Ann. Otol., Rhin. & Laryng. **49**: 1083 (Dec.) 1940.
12. Davison, F. W.: Personal communication to the author.

bronchopulmonary suppuration producing obstructive symptoms; however, the use of atropine prior to bronchoscopy may be justified in reducing the total amount of secretion and thus making the procedure easier for the patient.

Specifically, the use of the various agents described may be of distinct advantage in the treatment of certain diseases in manners determined through these studies. In bronchiectasis and in certain types of asthma in which bronchial obstruction plays a role in the symptomatology and pathology, frequent inhalations of carbon dioxide by mask, together with steam inhalations, may be used to augment the postural drainage and bronchoscopic aspiration which are fundamentally important. The use of steam and carbon dioxide between bronchoscopies, and especially shortly prior to bronchoscopy, is indicated if the sputum is known to be extremely thick and tenacious. Such therapy greatly enhances the action of any expectorant drug which is being administered.

In laryngotracheobronchitis, the use of a room kept at 70-75 F. with a relative humidity of 80-95 per cent provides satisfactory conditions for liquefying secretions. If, because of an increasing edema, obstruction of the airway progresses in spite of the removal of secretions, oxygen may become necessary. In such instances adequate provision for a high degree of humidity in the oxygen tent is essential. The attachment of a mechanical humidifier to the tent in the manner suggested by Davison is the most practical means of accomplishing this.

Postoperative massive collapse of the lung, produced by the occlusion of a major bronchus by viscid mucopus, is almost always spontaneously relieved if the patient can be encouraged to breathe deeply and cough. Steam inhalations aid in liquefying secretions and thus facilitate their removal, but carbon dioxide has become the most commonly used expectorant in the treatment of this disease because of its extremely efficient action in increasing the rate and depth of respiration as well as in aiding to liquefy the secretions. Actual bronchoscopic suction when these agents fail, or if the condition of the patient demands immediate intervention, must always be available.

The influence of the agents studied on the mucosa and inflammatory products of the nasal accessory sinuses has not been studied in detail. It remains to be seen whether an inflamed mucous membrane of the upper respiratory tract is similarly responsive to carbon dioxide when this action is not dependent on an actual increase in the respiratory movements.

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ABSTRACT OF DISCUSSION

DR. H. G. PONCHER, Chicago: Chronic cough has incited therapeutic attempts out of proportion to a great many other symptoms in medicine. There is a tendency to overtreat cough as a symptom, particularly in infants and young children. The points that Dr. Holinger brought out are of particular interest in this phase of practice. When a child or an infant is seriously ill with cough, there is a tendency to put such a patient on opiate-containing cough mixtures or mixtures containing belladonna or atropine or, if the patient is cyanotic, there is the compulsion to resort to routine use of oxygen without first attempting to remove the obstructing factor which produces cyanosis. These procedures Dr. Holinger has shown to be definitely antiexpectorant in action, and any one who has had experience has observed that the patients are sometimes not only not benefited but in some cases actually harmed. The statement is often made that when a patient receives oxygen through a bottle or a tent there is a sufficient amount of moisture in the gas to prevent any drying of secretion. That, in our experience, is not true. The patients who receive oxygen therapy alone usually have a difficult time bringing up sputum. Dr. Holinger's contribution to this phase of treatment is very important. Not only were we able to get material for examination, but his direct observation of the bronchial tree was important in corroborating changes that were formerly surmised. Carbon dioxide may not only be used in conditions of atelectasis or bronchiectasis but may be extended to the treatment of conditions that formerly never suggested its use. I refer particularly to the treatment of acute bronchitis, in which the sputum is very tenacious and is difficult to raise. The treatment with carbon dioxide results in liquefaction and thinning of the secretion, so that the child is able to breathe freely and raise the material. Severe asthma in children is much improved by the use of carbon dioxide. Other conditions, like pertussis, in which the infant or child almost strangles on thick, tenacious mucus, are also definitely benefited by such therapy in conjunction with moist air. I would like to emphasize again the important clinical implications that Dr. Holinger brought out: the routine use of atropine and belladonna derivatives, opiates and oxygen without carbon dioxide and moist air should be condemned, and the beneficial effect of pure carbon dioxide inhalations in conjunction with moist air in conditions which ordinarily do not respond to the usual expectorant measures.

Clinical Notes, Suggestions and New Instruments

CEPHALIC TETANUS ACCOMPANIED WITH PARALYSIS OF THE FACIAL NERVE AND GENERALIZED TETANUS

WILLIAM W. TRIBBY, M.D., AND CARROLL H. LONG, M.D.
NEW ORLEANS

Only 12 cases of cephalic tetanus accompanied with paralysis of the facial nerve have appeared in the American literature, although well over 100 instances have been reported in foreign publications. In 1895, Willard [1] reviewed 74 cases of cephalic tetanus and reported the first case in America associated with paralysis of the facial nerve. In 1907 Eastman [2] wrote a short review of the cases reported by Willard,[1] Lange [3] and Lloyd [4] and added 3 previously unrecorded cases. He included reports on only those cases in which there was paralysis of one or more cranial nerves. The only other review of the American literature has been that of Brown,[5] who in 1912 found 93 cases reported in the world literature and added 1 of his own. Since that time 1 case has been reported by each of the following authors: Carson,[6] Carr,[7] Lewis,[8] Gray [9] and Watkins.[10] In addition to these reports, we have found 3 cases of cephalic tetanus without paralysis of the facial nerve. Irvin [11] reported a case of generalized tetanus which followed a severe injury to the right eye. Bishop, Du Bose and Hamlin [12] reported a

From the Department of Pathology (Dr. Tribby) and the Department of Surgery (Dr. Long) of the Tulane University of Louisiana School of Medicine.

1. Willard, De F., and Johnston, J. I.: Tetanus Cephalic, Tr. Coll. Physicians Philadelphia **17**: 27, 1895.
2. Eastman, F. G.: Cephalic Tetanus in American, Neurographs **1**: 8, 1907.
3. Lange, H.: A Case of Tetanic Hydrophobia or Cephalic Tetanus, Brooklyn M. J. **10**: 401, 1896.
4. Lloyd, J. H.: Cephalic Tetanus with Paralysis of Both Seventh Nerves, J. A. M. A. **45**: 1072 (Oct. 7) 1905.
5. Brown, A. J.: Cephalic Tetanus, Ann. Surg. **55**: 473, 1912.
6. Carson, A. L.: A Case of Acute Traumatic Cephalic Tetanus, Cincinnati Lancet-Clinic **113**: 338, 1915.
7. Carr, G. B.: Cephalic Tetanus: Case, Kentucky M. J. **26**: 579, 1928.
8. Lewis, K. M.: Report of Case of Severe Head Tetanus with Recovery, J. A. M. A. **74**: 459 (Feb. 14) 1920.
9. Gray, C. M.: Head Tetanus with Facial Paralysis: Case Report and Résumé of Methods of Treatment, J. Missouri M. A. **31**: 139, 1934.
10. Watkins, A. L.: Facial Paralysis in Cephalic Tetanus, Arch. Neurol. & Psychiat. **41**: 788 (April) 1939.
11. Irvin, E. H.: Head Tetanus, Bull. El Paso County M. Soc. **7**: 10, 1915.
12. Bishop, J. M.; Du Bose, R. H., and Hamlin, F. E.: Otogenous Tetanus, J. A. M. A. **98**: 1546 (April 30) 1932.

case of otogenous cephalic tetanus and Hyman [13] a case which followed tonsillectomy. The number of cases is not great enough to justify a statistical analysis.

REPORT OF CASE

First Admission.—H. W., a white man aged 28, a farmer, was admitted to the Charity Hospital on May 18, 1940. Six days before admission he had been standing in his barnyard knocking mulberries out of a tree with a stick; the stick fell back and struck his face, causing what appeared to be two small abrasions on the right cheek. Two days later the injured site became painful, red and swollen. Hot compresses were applied, and pus was expressed in small amounts daily thereafter.

The temperature was 100.2 F., the pulse rate 92 a minute, the respiratory rate 20 a minute and the blood pressure 135 mm. of mercury systolic and 85 mm. diastolic. The patient was tall, well developed and well nourished and did not appear acutely ill. There was an intensely red, warm, indurated swelling of the right cheek, about 4 cm. in diameter. An area 1.5 cm. in diameter, in the center of the lesion was fluctuant. Removal of a small crust allowed about 2 cc. of thick yellow pus to escape. The superficial and deep reflexes were normal. The blood showed hemoglobin 80 per cent (Tallqvist), red blood cells 5,000,000 and white blood cells 8,000 with a normal differential count. A Kline test of the blood gave negative results.

The patient was treated continuously with hot compresses of physiologic solution of sodium chloride applied to the right cheek. A small rubber dam was inserted into the lesion for twenty-four hours. Although moderate amounts of pus continued to drain from the abscess, the cellulitis subsided in three days and the patient was discharged from the hospital. He did not receive tetanus antitoxin.

Second Admission.—The patient returned to the outpatient clinic on May 27, fifteen days after the injury, and was readmitted to the hospital. He complained that pain in the lower part of the back, of two days' duration, was exaggerated by walking and by movements of the trunk. At home he had applied hot saline compresses to the right cheek, but pus, although thinner, had continued to drain from the wound. Gradually, in the period of the three days preceding his second admission, he had become unable to open his mouth, move the muscles of the right side of his face or close his right eye.

The rectal temperature was 101 F. and the pulse rate 106. The patient appeared acutely ill. His face was flushed and he was perspiring freely. He was easily startled but was mentally alert and cooperative. There was complete peripheral paralysis of the right facial nerve. He was unable to whistle, elevate the right eyebrow or show his teeth on the right side. The right eyelid could not be closed. Movements of the left side of the face were intact. He was able to open the mouth a distance of about 2 cm. on the left side, but movement of the right jaw was more restricted. The abscess of the right cheek was surrounded by an area of induration about 2.5 cm. in diameter. Thin yellow pus could be expressed from the central opening. Inspection with a small probe revealed a narrow cavity extending downward and to the right a distance of approximately 2 cm. There was some stiffness of the neck. The chin could be flexed passively on the chest with the production of great pain. There was slight spasticity of the abdominal and back muscles. The arms and legs were relaxed with difficulty, and the patient moved them in an unsteady, jerky fashion. The deep reflexes of the achilles and patellar tendons were hyperactive. There was a slight increase of the left knee jerk over the right one. Sustained ankle and patellar clonus was present. A spinal puncture revealed normal conditions. The white blood count was 9,750, with 80 per cent polymorphonuclear leukocytes.

The diagnosis of tetanus was suggested by trismus, hyperactive reflexes and muscular spasticity. These signs became exaggerated the day following admission with the onset of attacks of severe generalized pain in the back, lasting one to two minutes, at which times the patient's body became opisthotonic with rigid extremities and a boardlike abdomen. No difficulty in swallowing was experienced. These attacks were precipitated by slight stimuli such as unexpected questioning or movement of the bed.

The local lesion was treated with daily applications of zinc peroxide paste, but repeated cultures of pus from the abscess demonstrated the presence of Staphylococcus pyogenes albus, Clostridium welchii and Escherichia coli. On May 31 the abscess pocket was incised, and a splinter of wood about 1.25 cm. in length was found embedded deep in the tissues. Clostridium tetani was cultured from this. Tetanus antitoxin was administered as follows: On May 28, 60,000 units was given intravenously and 40,000 units subcutaneously, on May 30, 100,000 units intramuscularly, on May 31, 60,000 units subcutaneously, on June 2, 60,000 units subcutaneously and on June 4, 100,000 units intramuscularly, a total of 420,000 units in a period of eight days. Each dose of antitoxin was followed on the next day by temporary diminution of the tetanic symptoms, but it was deemed wise to discontinue its use on June 3 because of the appearance of urticaria on the arms and the upper part of the chest. Avertin with amylene hydrate was administered rectally as needed, this being the only means of obtaining complete relaxation and sleep.

Early on the morning of June 6, the rectal temperature was 105.4 F., the respiratory rate was 36 and respirations were shallow; the pulse rate was 150 and the blood pressure 150 systolic and 60 diastolic. There was an occasional dry cough, but no signs of consolidation were elicited in the chest. Two days later, reexamination of the chest revealed bronchial breathing and a few fine rales at the base of the right lung. A diagnosis of bronchopneumonia at the base of the right lung was confirmed by a roentgenogram. Pneumococci were not found in the sputum. The white blood cell count was 12,450 with 86 per cent polymorphonuclear cells. Therapy with sulfapyridine was started on June 8 with an intravenous dose of the sodium monohydrate and was continued by mouth for eight days thereafter, until the temperature reached normal. The concentration of sulfapyridine in the blood on June 10 was 8.4 mg. per hundred cubic centimeters, and on June 11 it was 10.5 mg. The signs and symptoms of pneumonia and tetanus began to subside gradually, the decline coinciding with the administration of sulfapyridine. On June 12 the patient was able to move his neck and extremities with ease, although the abdomen was still spastic. He continued to have occasional mild convulsive seizures until June 13. Diminution of the trismus and slight improvement of the paralysis of the facial nerve were first noted on June 16. Neurologic examination just before his dismissal on June 24, forty-three days after the accident, revealed somewhat hyperactive tendon reflexes and slight spasticity of the abdominal muscles. There was no stiffness of the neck. The clonus of the ankle and patella had entirely disappeared. The patient could open his mouth about 3 cm. and could wrinkle the forehead and elevate the eyebrows, although there was a definite weakness of the facial muscles on the right side. The right eye could be closed, and blinking was present in it but not complete. The abscess of the face was healing rapidly. The patient was last seen in his home on August 28 by one of us and had completely recovered.

COMMENT

We add the thirteenth case of cephalic tetanus accompanied with paralysis of the facial nerve to the American literature. This type of tetanus is either rare or has not been recognized in this country. In the differential diagnosis of this case, tetanus might have been overlooked if generalized symptoms had not ensued. Tetanus should be kept in mind whenever there is paralysis of the facial nerve following a facial injury, especially when it is accompanied by trismus, for paralysis of the facial nerve may be the first symptom of early cephalic or generalized tetanus. The possibility of the presence of a foreign body in any wound should not be overlooked.

13. Hyman, S.: Head Tetanus Following Tonsillectomy with Subsequent Recovery, Am. J. Dis. Child. **49**: 1540 (June) 1935.

Our patient's condition was grave, and he showed no decisive improvement until a relatively high level of sulfapyridine was obtained in the blood stream. The drug was administered because of bronchopneumonia but may have had a favorable influence on the course of the tetanus. The work of Mayer[14] gives us some basis for this belief. This author administered sulfanilamide and sulfapyridine to a small series of mice and apparently demonstrated in them a high degree of protection against tetanus. He administered the drugs by mouth, beginning immediately after subcutaneous injections of tetanus bacilli and spores.

1430 Tulane Avenue.

Council on Pharmacy and Chemistry

REPORT OF THE COUNCIL

THE COUNCIL HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORT. THEODORE G. KLUMPP, M.D., Secretary.

NOMENCLATURE OF NONCRYSTALLINE ESTROGENIC PREPARATIONS

The Committee on Nomenclature of the Council on Pharmacy and Chemistry has been considering for some time the adoption of an official term to signify preparations containing estrogenic substances which are not in a pure chemical state. The need for such a nomenclature is obvious since the market contains numerous preparations of noncrystalline estrogens, and the multiplicity of proprietary terms for such products has been quite confusing to physicians. The rectification of this confusion is essential for discriminating between the crystalline and the noncrystalline preparations. The Council therefore adopted the following terms to signify noncrystalline estrogenic substances which contain principally estrone together with other estrogenic substances obtained in the extraction process: Solution of Estrogens or Solution of Estrogenic Substances. If the preparation is in a form other than solution, the appropriate term may be substituted for "Solution," such as Suppositories of Estrogens or Estrogenic Substances, Tablets of Estrogens, and so on.

The Council will require that such preparations be designated by either of these names for inclusion in New and Nonofficial Remedies. Also it will be necessary to state beneath the title the source of the preparation, such as whether it is from pregnant human urine, pregnant mares urine or placenta, and the predominant estrogenic substances.

The Council has already accepted such a noncrystalline preparation, namely Amniotin (Squibb). The Council has recognized this firm's right to Amniotin as a proprietary term.

NEW AND NONOFFICIAL REMEDIES

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION.

THEODORE G. KLUMPP, M.D., Secretary.

EPINEPHRINE-U. S. P. (See New and Nonofficial Remedies, 1941, p. 252).

Suprarenalin (Armour) (See New and Nonofficial Remedies, 1941, p. 253).

The following dosage form has been accepted:

Suprarenalin Solution 1:1,000 in 5 cc. vials (for hypodermic use): Contains suprarenalin (epinephrine) as hydrochloride 0.10 per cent, chlorobutanol (chloroform or chloral derivative) 0.50 per cent, sodium bisulfite (not more than) 0.10 per cent, physiological salt solution q. s.

DIGITALIS (See New and Nonofficial Remedies, 1941, p. 204).

The Wm. S. Merrell Company, Cincinnati.

Digitalis Tablets, 1¼ grains-Merrell.—Each tablet is equivalent to 1 U. S. P. unit.

14. Mayer, R. L.: Action of Sulfanilamide and Sulfapyridine on Tetanus Bacilli and Toxin, Compt. rend. Soc. de biol. **130:** 1560, 1939.

THEOPHYLLINE WITH ETHYLENEDIAMINE (See New and Nonofficial Remedies, 1941, p. 583).

The following dosage forms have been accepted:

Ampules of Aminophylline, 2 cc., 0.48 Gm. (7½ grains): Each ampule contains aminophylline 0.48 Gm. and benzyl alcohol 0.04 cc. in sufficient distilled water to make 2 cc.
Prepared by the Lakeside Laboratories, Inc., Milwaukee.

Ampules of Aminophylline, 10 cc., 0.24 Gm. (3¾ grains): Each ampule contains aminophylline 0.24 Gm. in sufficient distilled water to make 10 cc.
Prepared by the Lakeside Laboratories, Inc., Milwaukee.

Tablets of Aminophylline, 0.1 Gm. (1½ grains).
Prepared by the Lakeside Laboratories, Inc., Milwaukee.

ASCORBIC ACID (See New and Nonofficial Remedies, 1941, p. 557).

The following dosage forms have been accepted:

Tablets Ascorbic Acid-Breon, 100 mg.
Prepared by George A. Breon & Co., Inc., Kansas City, Mo.
Tablets Ascorbic Acid-Breon, 25 mg.
Prepared by George A. Breon & Co., Inc., Kansas City, Mo.
Ascorbic Acid Tablets-Stearns, 50 mg.
Prepared by Frederick Stearns & Company, Detroit.
Ascorbic Acid Tablets-Stearns, 100 mg.
Prepared by Frederick Stearns & Company, Detroit.

MERCURY OXYCYANIDE (See New and Nonofficial Remedies, 1941, p. 348).

The following dosage forms have been accepted:

Ampules of Mercury Oxycyanide 0.008 Gm. (⅛ grain), 5 cc.: Each 5 cc. contains 0.008 Gm. mercuric oxycyanide-N. N. R. dissolved in distilled water.
Prepared by the Lakeside Laboratories, Inc., Milwaukee.
Ampules of Mercury Oxycyanide 0.011 Gm. (⅛ grain), 5 cc.: Each 5 cc. contains 0.011 Gm. mercuric oxycyanide-N. N. R. dissolved in distilled water.
Prepared by the Lakeside Laboratories, Inc., Milwaukee.

PONTOCAINE HYDROCHLORIDE (See New and Nonofficial Remedies, 1941, p. 77).

The following dosage form has been accepted:

Pontocaine Base Eye Ointment: An ointment containing 0.5 per cent of pontocaine base, the free base of pontocaine hydrochloride, dissolved in white petrolatum.
Prepared by the Winthrop Chemical Co., New York.

SULFANILAMIDE-NATIONAL DRUG CO. (See New and Nonofficial Remedies, 1941, p. 508).

The following additional dosage forms have been accepted:

Sulfanilamide-National Drug Co., Tablets, 1 grain.
Sulfanilamide-National Drug Co., Tablets, 7½ grains.

SULFATHIAZOLE (See New and Nonofficial Remedies, 1941, p. 519).

Sulfathiazole-Lilly.—A brand of sulfathiazole-N. N. R.
Manufactured by Eli Lilly and Company, Indianapolis. U. S. patent applied for. No U. S. trademark.
Tablets Sulfathiazole-Lilly, 0.25 Gm. (3¾ grains).
Tablets Sulfathiazole-Lilly, 0.5 Gm. (7½ grains).

LUNOSOL (See New and Nonofficial Remedies, 1941, p. 497).

The following additional dosage form has been accepted:

Liquid Lunosol.—An aqueous solution containing 100 Gm. of lunosol in each hundred cubic centimeters. One cc. of liquid lunosol is equivalent in silver chloride content to 1 Gm. of lunosol.
This concentrated aqueous solution of lunosol is marketed in ½ and 2 ounce dropper bottles, accompanied by an empty dilution bottle, thus affording a convenient means of preparing the various dilutions which may be indicated; also in 1 ounce and 4 ounce bottles for dispensing.

SUSPENSION OF EPINEPHRINE IN OIL 1:500-N. N. R. (See New and Nonofficial Remedies, 1941, p. 255).

EPINEPHRINE IN OIL 1:500-ENDO.—A brand of suspension of epinephrine in oil 1:500-N. N. R.
Manufactured by Endo Products, Inc., Richmond Hill, N. Y. No U. S. patent or trademark.
Ampoules Epinephrine in Oil 1:500-Endo, 1 cc.—A suspension of 2 mg. of epinephrine base in 1 cc. of peanut oil.

PROCAINE HYDROCHLORIDE (See New and Nonofficial Remedies, 1941, p. 80).

The following dosage form has been accepted:

Hyposols Solution Procaine Hydrochloride 2%, 2 cc.: Ampules containing 0.04 Gm. of procaine hydrochloride dissolved in sufficient physiological solution of sodium chloride to make 2 cc.
Prepared by The Drug Products Co., Inc., Long Island City, New York.

MEDICAL EDUCATION IN THE UNITED STATES AND CANADA

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THE MILITARY EMERGENCY AND THE MEDICAL PROFESSION

A Statement by Major General James C. Magee, Surgeon General, U. S. Army

In the present military emergency, the Medical Department of the Army must look for the greatly increased numbers of medical, dental and veterinary officers required for military service to the professions as established and practicing in civil life. That this fact has impressed itself with full force on the minds of the civilian members of the professions is attested by the many inquiries, proffers of service and suggestions directed toward a solution of the problems involved coming from all sections of the nation.

The magnitude of the military effort demands the separation of thousands of practitioners from their accustomed occupations, and the same holds true of those who are engaged solely in administrative and instructional lines of endeavor. It is patent, in view of the administrative policies now applicable to the procurement of officer personnel whereby the choice of individuals for service is almost entirely restricted to those at present holding Reserve commissions, that certain dislocations will take place in communities and organizations that will be regarded as, and in fact will be, hardships to those concerned. A broadened base from which to draw officers for duty would of course serve to ameliorate the situation.

In the present emergency it is difficult to be specific as to the manner in which medical schools may best serve military interests. Within recent weeks the War Department liberalized its policy in reference to the deferment of military service for medical students by granting authority to commission members of the junior and senior classes in the Medical Administrative Corps, so placing them under the control of the Surgeon General. Students accepting such commissions can be held in deferment; on graduation they can be commissioned in the Medical Corps Reserve and, on completion of one year's internship, ordered to active duty in their capacity as physicians. While this arrangement is not ideal it is helpful and, if the principle is rigidly followed, should serve to make available a large group of young physicians each year who can be best spared from civil life, so leaving in their communities a like number of more necessary and more perfectly established older men. In this respect medical schools can be very helpful by urging their students to seek commissions in the Medical Administrative Corps when eligible.

Because many members of medical school staffs hold Reserve commissions, some of them will be sought for military service. It is not the desire of the Surgeon General to disrupt any essential established institution or program by the withdrawal of key personnel and, whenever conditions will permit, deferment will be granted such persons. However, if this policy is to become applicable to any effective degree, it becomes incumbent on the administrative heads of such institutions to consider carefully their lists of personnel, evaluate each individual's qualifications in reference to the needs of the institution and of the Army, and request deferment only for those who are in fact essential staff members whose separation would entail real hardship.

Many medical schools have generously offered the use of their facilities for the advanced training of officer personnel and for the training of enlisted technicians. A splendid field, susceptible of development to the great good of the Medical Department, is here available should our necessity become so acute as to warrant acceptance of these proposals. At present, however, the organization and operation of the department are such that it is not practicable to adopt these methods and we must look on the medical schools, in this respect, as a reserve to be made available when needed.

One great contribution to the medical effort is being made that deserves comment. It is to be found in the splendid work being done by members of various advisory boards and committees now engaged in military

medical activities in liaison with the Surgeon General. These gentlemen are in most instances connected with our great medical teaching institutions and in that capacity bring to their tasks not only their own high talents but the names and prestige of their schools as well. This in itself is a great support and aid to the Army Medical Department.

It is impossible to foresee at present the ultimate demands to be made on the several professions engaged in the healing arts in our country nor is it possible now to prophesy what changes in procedure may become necessary in reference to the employment of professional personnel, but it is certain that the medical schools of the nation will continue in the very first rank of those agencies engaged in the preservation of the American medical tradition through complete support to the military forces.

August 12, 1941.

FORTY-FIRST ANNUAL PRESENTATION OF EDUCATIONAL DATA BY THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

A summary, statistical and editorial, of the educational activities of the Council on Medical Education and Hospitals is presented annually in the Educational Number of THE JOURNAL. In the following pages will be found the report for the academic year 1940-1941, the usual review of preliminary and undergraduate education, a description of the approved medical schools of the United States and Canada, revised lists of hospitals approved for the training of interns and for residencies and fellowships in the specialties, and an audit of what is being done, and by whom, throughout the various states to extend opportunities for the advanced education and continued training of practicing physicians. In this section is a descriptive account of numerous clinical societies and educational organizations engaged in all types of graduate and postgraduate medical education. The major national defense regulations, as far as they affect medical education and medical students, are reproduced in a readily accessible form. Finally are included the official requirements of each of the fifteen approved examining boards in medical specialties, together with figures showing the numbers certified to date.

The Educational Number of THE JOURNAL has proved to be an indispensable source of information for students, interns, residents and practicing physicians and those interested in specialty certification. It interests also presidents of universities maintaining medical schools, the deans and other officials of medical schools, licensing agencies, the directors and staffs of hospitals, and the various general and special societies interested in the promotion of graduate and postgraduate medical education. It is in frequent demand by governmental agencies. In addition to the circulation of THE JOURNAL, almost two thousand reprints of the entire study are distributed, and an equal number of separate reprints of the lists of hospitals.

All these data are based on current official reports. Acknowledgment is tendered the officers of the institutions mentioned and others for their ready cooperation in supplying the material presented herewith and for other records furnished throughout the year to the office of the Council and the members of its staff on inspection or visitation, enabling the Council to maintain its medical student and hospital registers efficiently and to carry on its activities as outlined by the House of Delegates of the American Medical Association.

DEFENSE ACTIVITIES

Leaders in education acknowledge the paramount importance of national defense. National defense, however, includes not only military preparedness but also the preservation and development of all institutions necessary for the safety and welfare of the people. An effective program of national defense, therefore, demands that educational institutions which provide a continuous supply of men skilled in professions, notably in medicine, be maintained unimpaired. To this end the Council on Medical Education and Hospitals has been frequently in conference with the medical services of the army and navy. Through its Committee on Medical Preparedness, the American Medical Association has rendered and continues to render every possible assistance.

Medical Schools.—The faculties of medical schools have been classified with respect to availability for medical service in national defense. An alphabetical list of essential faculty members was supplied the Surgeon General of the United States and the commanding officer of each corps area in the fall of 1940 and was subsequently revised as occasion required. In the majority of cases reserve officers who occupy essential positions on the faculties of medical schools have been deferred for a reasonable time until a replacement can be secured or until a teaching assignment has been completed. It has been suggested by the office of the Surgeon General that, in order to maintain uninterruptedly the instruction of medical students, those members of medical faculties who are essential should not at the same time hold commissions in the Reserve Corps and, more especially, should not be assigned to affiliated hospital units. The War Department expects that when an affiliated unit is called to active service every officer should be able to go, as there has been time to arrange for others to take over his civilian responsibilities.

At a meeting of the executive council of the Association of American Medical Colleges, held in Chicago, May 30, 1941, three recommendations were made and submitted to member colleges of the association and to the Council on Medical Education and Hospitals. These were:

The Executive Council recommends that those schools which can do so, without lowering standards of medical education, increase the enrolment of the 1941 entering class by 10 per cent in order to help meet the medical needs of the present national emergency.

The Executive Council recommends that the Association urge every medical college which can do so, without lowering standards of medical education, to continue the required medical training of the fourth year during the summer of 1941 in order to graduate at an earlier date as many students as possible.

The Executive Council recommends that the Association make a study of the need for and the possibility of revising the schedule of instruction in medical colleges with a view to accelerating the output of graduates during the national emergency without any lowering of standards of medical education.

The Council on Medical Education and Hospitals expressed the opinion that, as some schools have for many years operated on the quarter plan, formal action

approving this procedure was not needed at present. In the absence of any definite information from the War Department as to the necessity for increasing enrolments or accelerating the output of medical graduates, the Council took no action on any of these matters.

Forty-four medical schools have increased the enrolment of the 1941 entering class by a total of 329 students. It is anticipated that the sophomore enrolment will be increased 40, juniors 131 and seniors 79. Eleven schools have made it possible for students to anticipate, during the current summer, a part of the required work of the fourth year. In three of these schools the program is required. Classes will be graduated in February or March by eight schools. Three schools will allow seniors to finish their work two months earlier and begin their internship or other work at that time, but they will graduate with the regular class in June. Two schools are planning to operate on the four quarter plan.

The medical curriculum has not thus far been curtailed, although the total time involved has been shortened by cutting down vacations. Additional courses in military medicine are being offered. The medical schools, apparently, are able to proceed without extensive revision of the curriculum and without shortening the period of residence. An accelerated program is not possible in many institutions for various reasons, including the fact that their teaching force has been reduced for military reasons. Others would consider such a program if completion of the course could be integrated with hospital internships. The financial aspect is an important consideration both for students and for schools.

Medical Students.—In the Selective Service Act of 1940 there was no provision for the exemption or deferment of medical students as such. Like all other students, they were placed in class I-D which granted them deferment until approximately July 1, 1941. On May 4, 1941 deferment from military training of individual medical students was recommended by Brig. Gen. Lewis B. Hershey, deputy director of Selective Service. But the actual decision, under the law, rests with the local boards. The release from the national headquarters of the Selective Service System reads as follows:

FOR RELEASE: SUNDAY, MAY 4, 1941

Moving promptly to meet a "growing national shortage of physicians and surgeons," reported by the Office of Production Management, a policy of deferment from military training of individual medical students "who give reasonable promise of becoming acceptable medical doctors" was proclaimed today by Brig. Gen. Lewis B. Hershey, deputy director of Selective Service. These deferments should be continued in each individual case so long as the student is progressing satisfactorily, he said.

General Hershey's memorandum, which summarizes the report of the OPM, was sent to all State Selective Service Directors for communication to their local boards. It stresses the OPM statement that the shortage of physicians and surgeons affects both the nation's armed forces and the civilian population and that the utmost care must be exercised to meet both needs.

Local boards are urged to see that, while no practicing doctor whose services are necessary to his community is called for military service, the requirements of the armed forces for physicians and surgeons also are filled. It also is stressed that where doctors, including interns, are eligible for military service they should be encouraged to apply for Medical Reserve Corps commissions, but that they will be inducted if they are placed in class I-A and fail to take advantage of the opportunity to be commissioned. In the case of interns, it was pointed out that, if commissioned, they will be permitted by the War Department to complete one year's internship.

Summarizing the OPM report on its study of the situation, General Hershey pointed out that it indicates a present need of around 9,000 medical officers for the Army, Navy, Public Health Service and Veterans Administration in addition to present staffs. This approximates a reduction of about 5 per cent in the number of doctors now available for service in civilian life, and it is estimated that the further demand caused by health problems in communities expanded by new defense industries will increase this civilian need to about 10 per cent.

In addition to the 9,000 additional medical officers required by the Army, Navy and other agencies, General Hershey said the OPM report showed a probable annual turnover of around 3,500 because of retirement of Regular Medical Officers and the expiration of tours of duty of Reserve Medical Officers.

The OPM report estimates that there are 155,000 practicing physicians in the United States, of whom about 27,000 are 65 years of age or older, and the mortality is around 3,800 a year. Their places can be filled only by medical graduates who enter the profession each year and their number is estimated at approximately 8,000, of whom only 60 to 65 per cent probably would be qualified physically or otherwise for military service.

Commenting on this situation in announcing the Selective Service policy of deferring medical students who are making satisfactory progress in their professional training, General Hershey's memorandum to state directors stated:

"There are no replacements for medical students who are withdrawn from school. Consequently if the supply of medical students who are to be graduated into the medical profession is reduced through their induction to serve in a nonprofessional capacity, an increasing reduction of physicians available for military service as well as an aggravation of the increasing overall national shortage will result."

As an outline of policy and procedure for the Selective Service System concerning medical students, General Hershey quoted the OPM report:

"It is of paramount importance that the supply be not only maintained but encouraged to grow, and that no student or intern who gives reasonable promise of becoming an acceptable medical doctor be called to military service before attaining that status."

Local boards were cautioned, however, that a deferment is not an exemption and that the obligation and liability for military service remain on its expiration.

General Hershey's memorandum also called attention to a previous one issued on April 22 prescribing procedure for deferment of individual students in a number of specialized professional fields which were suggested by the Office of Production Management. This memorandum suggested procedure for presenting local boards with detailed facts concerning individual students which was prepared by the American Council of Education and concurred in by National Headquarters of the Selective Service System. As set forth in a bulletin (No. 10) issued by the Council, this provides for getting into the hands of the local board of a "Student Statement of Information" concerning his status and plans and an affidavit by his college or university in which the college officials testify as to his standing, courses and occupational objectives, together with a general evaluation of the student as a "necessary man" for occupational deferment.

By recent amendment of paragraphs 352 and 353 of the Selective Service Regulations a new class has been introduced; namely, class II-B, which assures the student deferment as long as his status remains unchanged.

Amendment No. 59, effective June 5, 1941, amends Volume Three, section XVIII, paragraphs 352 and 353 of the Selective Service Act of 1940, to read as follows:

352. b. In class II-B shall be placed any registrant found to be a "necessary man" in any industry, business, employment, agricultural pursuit, governmental service or any other service or endeavor, or in training or preparation therefor, the maintenance of which is essential to the national health, safety or interest in the sense that a serious interruption or delay in such activity is likely to impede the national defense program.

353. *b.* Class II-B deferments shall not be limited as to the period during which they shall be effective. The case of a registrant classified as class II-B may be reopened and his classification considered anew in the same manner and for the same reasons as any other classification.

The House of Delegates of the American Medical Association after a joint conference of the Committee on Medical Preparedness of the American Medical Association and the Council on Medical Education and Hospitals, held June 2, 1941, urged the War Department to provide for all medical students in approved medical schools and for premedical students some form of military status which will make clear the fact that, in preparing themselves to become physicians for the services of the country, these students are already actually giving an essential service under the preparedness program and are not seeking to evade, escape or defer their responsibilities.

On May 26, 1941 authority was granted for the commissioning as second lieutenants in the Medical Administrative Corps Reserve, after July 1, 1941, male junior and senior medical students in approved medical schools who are fit for military service; also for commissioning interns as first lieutenants, Medical Corps Reserve, with the understanding that they will be ordered to one year's active duty immediately on completion of their internship. The text of the communication of the Adjutant General reads:

SUBJECT: Deferment of Medical Students.

TO: All Corps Area and Department Commanders, and The Surgeon General.

1. Authority is granted for the commissioning as second lieutenants in the Medical Administrative Corps Reserve, after July 1, 1941, male junior and senior medical students in grade A medical schools in the United States who are fit for military service; also for commissioning interns as first lieutenants, Medical Corps Reserve, with the understanding that they will be ordered to one year's active duty immediately on completion of their internship.

2. Appropriate publicity will be given the above authority by the Corps Area and Department Commanders. Students and interns who are properly qualified will be invited to submit applications for appointment, final approval in each case to be made by the War Department.

By order of the Secretary of War:

E. A. ADAMS,
Major General,
The Adjutant General.

On June 18, 1941 these orders were further amplified by authority to transfer officers so appointed to the War Department Reserve Pool and retained therein until eligible for appointment in the Medical Corps Reserve. The letter from the War Department outlining the procedure to be followed in applying for commissions has been forwarded to the dean of every medical school. The letter is as follows:

SUBJECT: Appointment of Medical Students in the Medical Administrative Corps Reserve.

TO: All Corps Areas, Department Commanders, and The Surgeon General.

1. The letter of this office of May 26, 1941 (AG 210.1 Med-Res. 5-1-41 RB-A) Subject: Deferment of Medical Students, is rescinded, and this letter is substituted therefor.

2. Authority is granted to Corps Area Commanders to waive the provisions of paragraph 5, Army Regulations 140-33, for the appointment in the lowest grade in the Medical Administrative Corps Reserve, after July 1, 1941, of physically qualified male citizens who are bona fide matriculants at approved medical schools within the United States and who have successfully completed the first two years of their medical education. Officers so appointed will be transferred to the War Department Reserve Pool and retained therein until eligible for appointment in the Medical Corps Reserve, or for action under paragraph 3 (*c*) below.

3. (*a*) Appointment will be made without reference to an examining board as prescribed in paragraph 20 c, AR 140-5, and without reference to the peacetime procurement objective for the Medical Administrative Corps Reserve.

(*b*) Applications, accompanied by report of physical examination, will be forwarded by the dean of the medical school to the commanding general of the corps area in which the school is located, together with a certified statement that the applicant has successfully completed the freshman and sophomore years of medical instruction and is an accredited matriculant in the junior or senior class in medicine at the institution. The certificate will state the prospective date of completion of the prescribed four year course of medical instruction.

(*c*) Officers of the Medical Administrative Corps Reserve appointed under the provisions of this letter and transferred to the War Department Reserve Pool will be discharged from the Officers' Reserve Corps for the convenience of the government, under the following circumstances:

1. Discontinuance of medical education.
2. Matriculation in an unapproved school of medicine.
3. Failure to complete successfully the prescribed four year course of medical instruction.
4. Failure to secure appointment in the Medical Corps Reserve within one year of the completion of the prescribed four year course of medical instruction.

(*d*) The Surgeon General will maintain adequate records to assure timely application for appointment in the Medical Corps Reserve and transfer from the War Department Reserve Pool, and to assure discharge as provided above.

4. Transfer to the Medical Administrative Corps Reserve of Reserve officers of other branches who are studying medicine, dentistry and veterinary medicine as authorized in AG letters dated April 17 and Aug. 28, 1940, Subject: Special Mobilization Procedures for Procurement of Medical Department Reserve Officers who are Students in Approved Medical Schools (AG 210.31 ORC 10-24-39 R-A) will continue as now authorized. Such transfer may be effected prior to actual matriculation provided the applicant has been accepted for enrolment by an approved school.

5. Appropriate publicity will be given the above authority by Corps Area Commanders, Department Commanders and the Surgeon General. Properly qualified students will be invited to submit application for appointment, final approval in each case to be made by the War Department.

By order of the Secretary of War:

E. A. ADAMS,
Major General,
The Adjutant General.

It would appear that every effort is being made by medical educators to cooperate in the national emergency while at the same time endeavoring to insure that the education of physicians is continued at the present level and without interruption. It should not be necessary to argue that a continuing and undiminished supply of well trained physicians is absolutely essential to the welfare of the nation. We cannot speed up that training beyond a certain point without lowering educational standards and degrading the quality of medical service. The present crisis demands, in fact, better qualified physicians if we are to face the future with reasonable confidence. Those who represent the medical schools are making every effort to preserve their institutions and to maintain, unimpaired, their priceless contribution to the health and welfare of the nation.

DEVELOPMENTS IN MEDICAL EDUCATION

The objective of medical education, it is customarily assumed, is the development of the best practitioners of medicine. Integrity, intelligence, industry, judgment and skill in the use of the scientific method are recognized as necessary traits of the successful medical student, to whose growth and development the school of medicine may largely contribute. The leading schools strive to bring out the best that is in each student by making him largely responsible for his own education.

Students applying for admission to medical schools are selected on the basis of the qualities enumerated, so far as they can be evaluated, and on evidence of capacity for intellectual growth, self reliance and maturity, all of which have little relationship to age or subjects taken. The subjects in which every medical student needs basic knowledge are English, physics, chemistry and biology. They provide him with a means of expression and a foundation for further study in the medical sciences. The Council's minimum requirement for admission to medical schools since 1918 has been two years of college work, including courses in English, and theoretical and practical courses in physics, biology and general and organic chemistry. Since 1939, three years of college study has been recommended for entrance into medical school. At that time 3.8 per cent of all students were admitted to nineteen schools with the minimum of two years. For the session 1940-1941 only eighty-three students, 1.4 per cent, were accepted by nine schools.

One of the striking chapters in the history of education deals with the part played by the American Medical Association, through its Council on Medical Education and Hospitals, in raising the standards of medical education in the United States. Instead of the poorest medical schools in the world, we now have the best. If the public had had to wait until a popular majority interested itself in providing good medical schools, we should have few of these schools today. It was the understanding of the physician together with his willingness to take responsibility and to contribute of his time and means that has made possible the unparalleled transformation of the last thirty years in the field of medical education. There has been a steady improvement in medical schools, in hospitals and, above all, in the competence of the young physicians who are entering practice.

During the academic years 1934-1936 a resurvey was made of all medical schools in the United States and Canada. The Council received the assistance and cooperation of the Association of American Medical Colleges and of the Federation of State Medical Boards of the United States. Representatives of the Council, in company with a representative of the college association or of the medical boards, visited eighty-nine schools in the United States and Canada. The results of this study were published early in 1940 [1] and contained an analysis of a vast amount of data supplied voluntarily by the schools. Although there were wide variations in the excellence of the schools visited, even the weakest of them was a stable and reputable institution as compared with the proprietary schools and diploma mills which existed before the Council on Medical Education and Hospitals began its investigations. The Council therefore refrained from publishing an individual analysis and criticism of each school but instead described in general terms the organization and administration, faculty and student personnel, and the clinical and financial resources of the schools, endeavoring to present an objective picture of medical education in this country for the years under review. However, to each school was sent a confidential report, showing graphically how it compared with the other recognized schools. By this analysis immediately many weaker schools were stimulated to bring themselves up to a higher standard. To some, even of the leading schools, it revealed deficiencies that had gone unnoticed. Universities have evinced greater interest in their medical departments, attempts have been made to develop new hospital relationships, and faculties of medicine have manifested more intense and personal interest in the improvement of their institutions.

Since the first classification of medical schools and the publication of the Carnegie report, probably no period has witnessed such activity and progress in the field of medical education as the last six years.

TABLE 1.—*Improvements in Medical Schools in the United States, 1940-1941*

Budgets	10 schools increased annual budgets from $5,000 to 33 per cent
Selection of students	Students selected more carefully, entrance requirements raised, higher scholastic standards adopted
Instructors	Additional instructors added in both laboratory and clinical divisions
Preclinical facilities	New laboratory building opened or ambitious building programs under way by four schools
Clinical facilities	New hospital building erected, wings added or buildings remodeled, affiliations reported, increase in beds allotted to teaching, better control of hospital facilities and better working arrangements reported by eight schools
Curriculum	Curriculum of junior and senior years extended through summer months to take full advantage of available clinical material reported by four schools
Library	The libraries of three schools have been improved by the addition of a new building, purchase of additional books and periodicals or a grant
Other facilities	(*a*) Orientation of laboratory work with the main branches of clinical work by two schools (*b*) Two schools report that teaching facilities in the field of psychiatry have been strengthened

A number of other innovations have been added designed to increase the practical value of the medical school training.

Summing up the reports of activities of the medical schools during the academic year 1940-1941, it is gratifying to outline the substantial improvements presented in table 1.

Medical schools now face an entirely new set of conditions. In the existing emergency, various pressure groups threaten to destroy or seriously impair the achievements of the last generation. At the same time, in the defense program, 617 instructors, chiefly Medical Reserve Officers, have gone to the colors. Their duties have been assumed, in many cases, by men of less experience. In many instances hospitals and medical schools have been cooperating actively with local, appeal, medical advisory and induction boards of the Selective Service by making available their facilities, resources and personnel. Many schools have organized hospital units. In the midst of all these activities every effort must be made to maintain our present standards in the training of physicians so that the health of our people shall not suffer.

PRELIMINARY EDUCATION

Since 1915 the Council on Medical Education and Hospitals of the American Medical Association has published a list of approved colleges of arts and sciences

(Continued on page 688)

1. Weiskotten, H. G.; Schwitalla, A. M.; Cutter, W. D., and Anderson, H. H.: Medical Education in the United States, 1934-1939, Chicago, American Medical Association, 1940.

TABLE 2.—*Recognized Medical Schools in the United States and Canada*

	Name and Location of School	1941-1942 Preliminary Requirement by Years	Students by Classes, Sessions 1940-1941						Graduates Since July 1, 1940	Applications for Admission to the 1st Year Will Be Received Until	Executive Officer	
			1st Year	2d Year	3d Year	4th Year	5th Year or Intern Year	Totals				
	ARKANSAS											
1	*University of Arkansas School of Medicine, Little Rock	2	82	68	66	70	..	286	70	Aug.	Byron L. Robinson, M.D. Dean	1
	CALIFORNIA											
2	University of California Medical School, Berkeley-San Francisco	3	62	59	59	59	52†	239	52	Jan.	President Robert G. Sproul, LL.D., Acting Dean	2
3	College of Medical Evangelists, Loma Linda-Los Angeles	3	75	64	82	77	90†	298	91	Jan.	E. H. Risley, M.D., Dean, Loma Linda; W. E. Macpherson, M.D., Assoc. Dean, Los Angeles	3
4	University of Southern California School of Medicine, Los Angeles	3	55	51	46	49	49†	201	49	March	Paul S. McKibben, Ph.D., Dean	4
5	Stanford University School of Medicine, Stanford University-San Francisco	3	62	61	59	58	60†	240	61	.....	Loren Roscoe Chandler, M.D., Dean	5
	COLORADO											
6	University of Colorado School of Medicine, Denver	3	58	52	49	45	..	204	45	April	Maurice H. Rees, M.D., Dean	6
	CONNECTICUT											
7	Yale University School of Medicine, New Haven	3	49	56	51	50	..	206	51	March	Francis G. Blake, M.D., Dean	7
	DISTRICT OF COLUMBIA											
8	Georgetown University School of Medicine, Washington	Degree	72	73	88	73	..	306	73	March	David V. McCauley, S.J., Ph.D., Dean	8
9	George Washington University School of Medicine, Washington	2	65	64	72	59	..	260	59	July	Walter A. Bloedorn, M.D., Dean	9
10	Howard University College of Medicine, Washington	2	64	30	36	21	..	151	22	June	John W. Lawlah, M.D., Dean	10
	GEORGIA											
11	Emory University School of Medicine, Atlanta	3	64	51	49	54	..	218	54	.....	Russell H. Oppenheimer, M.D., Dean	11
12	University of Georgia School of Medicine, Augusta	3	51	48	43	37	..	179	37	May	G. Lombard Kelly, M.D., Dean	12
	ILLINOIS											
13	Loyola University School of Medicine, Chicago	3	83	63	64	60	114†	270	107	.....	Francis J. Braceland, M.D., Dean	13
14	Northwestern University Medical School, Chicago	3	131	130	144	151	141†	556	134	March	J. Roscoe Miller, M.D., Dean	14
15	University of Chicago, Rush Medical College	3	...	...	...	...	..	212‖	94	.....	Earle Gray, M.D., Acting Dean	15
16	University of Chicago, The School of Medicine	3	...	...	...	...	...	238‖	42	March	Victor Johnson, M.D., Dean of Students	16
17	University of Illinois College of Medicine, Chicago	3	102	160	152	142	158†‖	616	302	June	David J. Davis, M.D., Dean	17
	INDIANA											
18	Indiana University School of Medicine, Bloomington-Indianapolis	3	130	117	113	98	..	458	98	March	Willis D. Gatch, M.D., Dean	18
	IOWA											
19	State University of Iowa College of Medicine, Iowa City	3	80	69	47	81	..	286	80	July	Ewen Murchison MacEwen, M.D., Dean	19
	KANSAS											
20	University of Kansas School of Medicine, Lawrence-Kansas City	3	78	70	70	71	..	289	71	May	H. R. Wahl, M.D., Dean	20
	KENTUCKY											
21	University of Louisville School of Medicine, Louisville	2	91	76	89	89	..	345	89	March	John Walker Moore, M.D., Dean	21
	LOUISIANA											
22	Louisiana State University School of Medicine, New Orleans	3	92	87	84	75	..	338	75	.....	Beryl I. Burns, M.D., Dean	22
23	Tulane University of Louisiana School of Medicine, New Orleans	3	134	105	123	121	..	483	121	Jan.	Maxwell E. Lapham, M.D., Dean	23
	MARYLAND											
24	Johns Hopkins University School of Medicine, Baltimore	Degree	70	62	78	72	..	282	72	June	Alan M. Chesney, M.D., Dean	24
25	University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore	3	100	88	89	92	..	369	92	Sept.	H. Boyd Wylie, M.D., Acting Dean	25
	MASSACHUSETTS											
26	Boston University School of Medicine, Boston	3	55	52	52	34	..	193	33	April	Bennett F. Avery, M.D., Dean	26
27	Harvard Medical School, Boston	2	125	133	133	137	..	528	137	March	C. Sidney Burwell, M.D., Dean	27
28	Tufts College Medical School, Boston	Degree	107	97	94	88	..	386	90	Sept.	A. Warren Stearns, M.D., Dean	28
	MICHIGAN											
29	University of Michigan Medical School, Ann Arbor	3	130	108	103	119	..	460	117	March	A. C. Furstenberg, M.D., Dean	29
30	Wayne University College of Medicine, Detroit	3 & Degree	64	62	67	55	58†	248	58	Feb.	Edgar H. Norris, M.D., Dean	30
	MINNESOTA											
31	University of Minnesota Medical School, Minneapolis	3	126	114	106	105	130†	451	132	Jan.	Harold S. Diehl, M.D., Dean	31
	MISSOURI											
32	St. Louis University School of Medicine, St. Louis	3	117	104	96	104	..	421	99	Sept.	Alphonse M. Schwitalla, S.J., Ph.D., Dean	32
33	Washington University School of Medicine, St. Louis	4	82	77	97	95	..	351	97	Sept.	Philip A. Shaffer, Ph.D., Dean	33

	NEBRASKA											
34	Creighton University School of Medicine, Omaha	3	63	47	51	62	..	223	64	.....	Charles M. Wilhelmj, M.D., Dean	34
35	University of Nebraska College of Medicine, Omaha	3	92	79	70	76	..	317	77	June	C. W. M. Poynter, M.D., Dean	35
	NEW YORK											
36	Albany Medical College, Albany	3	43	34	34	29	..	140	29	July	R. S. Cunningham, M.D., Dean	36
37	Long Island College of Medicine, Brooklyn	3	100	92	92	81	..	365	81	.....	Jean A. Curran, M.D., Dean	37
38	University of Buffalo School of Medicine, Buffalo	2	70	65	63	68	..	266	66	March	Edward W. Koch, M.D., Dean	38
39	Columbia University College of Physicians and Surgeons, New York	3	110	100	97	104	..	411	104	Feb.	Willard C. Rappleye, M.D., Dean	39
40	Cornell University Medical College, New York	3 & Degree	83	71	76	64	..	294	63	.....	William S. Ladd, M.D., Dean	40
41	New York Medical College, Flower and Fifth Avenue Hospitals, New York	Degree	84	75	79	67	..	305	67	.....	J. A. W. Hetrick, M.D., Acting Dean	41
42	New York University College of Medicine, New York	3	130	118	128	123	..	499	122	Jan.	Currier McEwen, M.D., Dean	42
43	University of Rochester School of Medicine and Dentistry, Rochester	3	54	56	48	44	..	202	43	March	George H. Whipple, M.D., Dean	43
44	Syracuse University College of Medicine, Syracuse	3	45	42	35	42	..	164	42	.....	H. G. Weiskotten, M.D., Dean	44
	NORTH CAROLINA											
45	Duke University School of Medicine, Durham	3	66	65	66	65	58††	262	65	April	Wilburt C. Davison, M.D., Dean	45
	OHIO											
46	University of Cincinnati College of Medicine, Cincinnati	3	77	75	78	76	75†‡	399	151	March	Stanley Dorst, M.D., Dean	46
47	Western Reserve University School of Medicine, Cleveland	3 & Degree	79	73	67	63	..	282	63	Sept.	Torald Sollmann, M.D., Dean	47
48	Ohio State University College of Medicine, Columbus	3	78	69	79	69	..	295	68	June	Hardy A. Kemp, M.D., Dean	48
	OKLAHOMA											
49	University of Oklahoma School of Medicine, Oklahoma City	3	63	62	56	54	..	235	54	Aug.	Robert U. Patterson, M.D., Dean	49
	OREGON											
50	University of Oregon Medical School, Portland	3	73	56	56	63	..	248	62	March	Richard B. Dillehunt, M.D., Dean	50
	PENNSYLVANIA											
51	Hahnemann Medical College and Hospital of Philadelphia	3	147	135	132	130	..	544	130	Sept.	William A. Pearson, M.D., Dean	51
52	Jefferson Medical College of Philadelphia	Degree	130	129	129	120	..	508	120	.....	Randle C. Rosenberger, M.D., Acting Dean	52
53	Temple University School of Medicine, Philadelphia	3	108	95	116	116	..	435	112	Sept.	William N. Parkinson, M.D., Dean	53
54	University of Pennsylvania School of Medicine, Philadelphia	3	123	108	129	126	..	486	125	March	William Pepper, M.D., Dean	54
55	Woman's Medical College of Pennsylvania, Philadelphia	3	41	30	21	23	..	115	23	Aug.	Margaret D. Craighill, M.D., Dean	55
56	University of Pittsburgh School of Medicine, Pittsburgh	2	86	79	71	55	..	291	55	March	William S. McElroy, M.D., Dean	56
	SOUTH CAROLINA											
57	Medical College of the State of South Carolina, Charleston	3	44	39	45	45	..	173	45	May	Robert Wilson, M.D., Dean	57
	TENNESSEE											
58	University of Tennessee College of Medicine, Memphis	2	144	101	104	112	..	461	110	.....	O. W. Hyman, Ph.D., Dean	58
59	Meharry Medical College, Nashville	3	67	51	50	48	..	216	48	March	Edward L. Turner, M.D., Dean	59
60	Vanderbilt University School of Medicine, Nashville	3 & Degree	51	49	52	54	..	206	54	.....	Waller S. Leathers, M.D., Dean	60
	TEXAS											
61	Baylor University College of Medicine, Dallas	3	84	80	75	67	..	306	64	.....	Walter H. Moursund, M.D., Dean	61
62	University of Texas Medical Branch, Galveston	3	102	103	93	84	..	382	85	.....	John W. Spies, M.D., Dean	62
	VERMONT											
63	University of Vermont College of Medicine, Burlington	3	32	30	31	31	..	124	31	May	Clarence H. Beecher, M.D., Chairman, Administrative Committee	63
	VIRGINIA											
64	University of Virginia Department of Medicine, Charlottesville	3	71	61	63	55	..	250	54	May	Harvey E. Jordan, Ph.D., Dean	64
65	Medical College of Virginia, Richmond	3	80	77	66	72	..	295	74	.....	Lee E. Sutton, Jr., M.D., Dean	65
	WISCONSIN											
66	University of Wisconsin Medical School, Madison	3	77	85	46	50	..	258	48	March	William S. Middleton, M.D., Dean	66
67	Marquette University School of Medicine, Milwaukee	3	84	88	70	70	73†	312	72	July	Eben J. Carey, M.D., Dean	67
	CANADA											
68	University of Alberta Faculty of Medicine, Edmonton, Alta	2	..	43	39	33	48#	201	37	.....	John James Ower, M.D., Acting Dean	68
69	University of Manitoba Faculty of Medicine, Winnipeg, Man	2	58	54	53	52	61#	217	62	April	A. T. Mathers, M.D., Dean	69
70	Dalhousie University Faculty of Medicine, Halifax, N. S.	2	53	42	40	42	42#	177	41	.....	H. G. Grant, M.D., Dean	70
71	Queen's University Faculty of Medicine, Kingston, Ont	1	46	45	44	45	42#	266	42	Aug.	Frederick Etherington, M.D., Dean	71
72	University of Western Ontario Medical School, London, Ont	2	47	46	33	29	30#	222	30	Aug.	F. J. H. Campbell, M.D., Dean	72
73	University of Toronto Faculty of Medicine, Toronto, Ont	1	139	130	117	110	116#	747	138	.....	W. E. Gallie, M.D., Dean	73
74	McGill University Faculty of Medicine, Montreal, Que	3	109	96	91	89	..	385	89	March	J. C. Meakins, M.D., Dean	74
75	University of Montreal Faculty of Medicine, Montreal, Que	Degree	53	53	49	48	53†	203	54	Sept.	Albert LeSage, M.D., Dean	75
76	Laval University Faculty of Medicine, Quebec, Que	Degree	86	59	50	63	57	315	69	Sept.	Charles Vézina, M.D., Dean	76

Statistics of Recognized Schools of the Basic Medical Sciences will be found in table 5, page 689.

* On probations since Dec. 4, 1938.

¶ Enrolment not on above table by classes for the two medical schools of the University of Chicago.

† Fifth year (internship) enrolment not included in total column.

‡ Fifth year (internship) discontinued beginning with the class of 1941.

‖ Fifth year (internship) discontinued for class of 1941 because of the national emergency.

†† Two year internship required after graduation.

Sixth year enrolment: Alberta, 38; Queen's, 44; Western Ontario, 31; Toronto, 135.

(Continued from page 685)

as a guide to medical schools in the selection of students and also to assist the prospective medical student in choosing a college for his premedical training. This list comprises colleges approved by the following national and regional educational associations:

Association of American Universities.
North Central Association of Colleges and Secondary Schools.
Middle States Association of Colleges and Secondary Schools.
New England Association of Colleges and Secondary Schools.
Southern Association of Colleges and Secondary Schools.
Northwest Association of Secondary and Higher Schools.

There are seven hundred and one colleges of arts and sciences approved by these agencies distributed as follows:

Association of American Universities	304
North Central	253
Southern	200
Middle states	125
Northwest	60
New England	44

Of those recognized by the Association of American Universities, all but nineteen are approved also by their district agency. In the various groups this dual approval of two hundred and eighty-five institutions is apportioned as follows:

North Central	109
Middle states	66
Southern	61
New England	31
Northwest	18

The five regional associations of colleges referred to cover among them the entire United States with the exception of the Far Southwest. Institutions in this area can secure only the approval of the national group —the Association of American Universities.

Junior colleges are approved by these agencies but are omitted from the Council's compilation. This action was taken Dec. 10, 1939 because the Council itself recommends three years of college preliminary to entrance into medical school and because all but a negligible percentage of medical students have actually taken three years or more in college. Medical schools, therefore, are selecting their students from among those who are already enrolled in colleges of arts and sciences which offer the full four year course leading to a bachelors' degree.

TABLE 3.—*Requirements for Admission to Medical Schools, 1936-1941*

	Degree	Years				
		Four	Three*	Three	Two and One-Half	Two
1936-1937	4	1	3	36	1	32
1937-1938	5	1	4	39	1	27
1938-1939	5	1	5	45	2	19
1939-1940	5	1	5	55	..	11
1940-1941	6	1	5	56	..	9
1941-1942	5	1	5	58	..	8

* Baccalaureate degree conferred in absentia at end of first medical year

While the minimum requirement of collegiate credit advocated by the Council is two years of college training, which include English and theoretical and practical courses in physics, biology and general and organic chemistry, three years or more in college is recommended. Since it cannot in general be assumed that all who have satisfied these requirements in terms of hourly credits are fitted for the study of medicine, qualitative standards also are imposed. As a rule applicants receive their preliminary education in institutions approved by accrediting agencies. Exception, however, is made in the case of those students who demonstrate superior ability.

TABLE 4.—*Freshman Students Admitted with Less than Three Years of College Preparation*

	Number of Schools With Two Year Requirement	Percentage
1936-1937	32	12.5
1937-1938	27	7.4
1938-1939	19	3.8
1939-1940	11	2.0
1940-1941	9	1.4

For the session 1941-1942, sixty-nine of the seventy-seven medical schools in the United States have adopted preliminary requirements in excess of the minimum; i. e., five require a degree, fifty-eight require three years, one requires four years and five schools will admit students with three years of college work if the baccalaureate degree is conferred in absentia at the end of the first year in medicine. Only eight schools have a stated two year requirement. These schools are the Universities of Arkansas, George Washington, Howard, Louisville, Harvard, Buffalo, Pittsburgh and Tennessee. In table 3 are presented for six years figures indicating the trend toward increasing admission requirements. The College of Medical Evangelists increased its prerequisite for the forthcoming session to three years. Albany Medical College, for the duration of the national emergency, has reduced its preliminary requirement from a degree to three years of college.

The general trend toward three or more years of college work would appear to be due to a desire for more thorough grounding in all the branches of chemistry and greater familiarity with nonscience subjects, such as languages, literature, history or economics. In table 4 it will be noted that actually but 1.4 per cent of the entire freshman class of 1940-1941 was admitted with less than three years. Of the nine schools with a two year requirement for this session, three admitted none on this basis, one admitted five, another eleven, two accepted thirteen, while one accepted twenty and still another twenty-one, a total of eighty-three. Thus eighty-three students were enrolled in six schools with two years of college work, although in each case they represent less than 50 per cent of the freshman class. In 1936-1937, 12.5 per cent of the entering class had only the minimum of preliminary education, but by 1938-1939 the number dropped to 3.8 per cent and in 1940-1941 to 1.4 per cent.

The importance of careful selection of students of medicine cannot be overstated. No other element in medical education is so significant for the future. Schools of medicine are in a fortunate position as compared with other professional schools in that they receive annually applications from more than twice as many candidates as they can accept. Entrance requirements have been progressively raised, but the mere accumulation of college credits is no guaranty of fitness for the practice of medicine.

The faculties of medicine in Canada vary in their premedical requirement. For the session 1940-1941 two required a degree for admission to a five year course, two had a six year medical course preceded by senior

matriculation which is equivalent to the work of the first year in a college of arts, five, including one school offering courses in the basic sciences, required two years, and one school requires three years before beginning a four year course. A table appears later in this study which records the number of graduates of 1941 holding baccalaureate degrees (table 21).

With but five exceptions, namely California, Connecticut, Massachusetts, Missouri and Nebraska, the state licensing boards also exact the two year requirement. Although their statutes do not conform with the two year college prerequisite, these states, with the exception of Massachusetts, do not license other than graduates of approved schools. Table 6 records the preliminary training required by each state medical licensing board. Alaska, Hawaii and Puerto Rico likewise require two years of preliminary training.

LENGTH OF MEDICAL COURSE

In fifty-two medical schools in the United States the medical course is taught in four calendar years of approximately thirty-two weeks. Seven medical schools, by eliminating long summer vacations, make possible completion of the course in less than forty-four consecutive months (table 7). A considerable number of the students of these schools do not elect to study during the summer months. The medical schools of the University of Chicago are operated on a plan of individual promotion permitting a student to advance as rapidly as he desires, but the great majority complete the course in twelve quarters. Medical practice acts of certain states, however, specify a four year professional course and it is advisable that students should assure themselves concerning the legal interpretation of the phrase.

Fifty-two schools offer a four year course; seven have a continuous schedule, four of which also require a hospital internship; seven require four years of systematic instruction followed by a fifth year spent as an intern or in research work. In all, there are sixty-six schools which offer the complete medical course.

Rush Medical College has heretofore offered clinical courses but will discontinue undergraduate teaching with the class of 1942.

Ten schools in the United States and one in Canada offer only the first two years of the medical curriculum and are designated as schools of the basic medical sciences.

The majority of these schools are located in smaller communities where the material required for clinical teaching is almost wholly lacking. In some instances, facilities for the satisfactory teaching of such subjects as physical diagnosis and gross pathology must be sought at a distance from the school. Introductory courses in medicine and surgery, which commonly form a part of the second year schedule, may be similarly handicapped. A study of the problem by the Council on Medical Education and Hospitals led to the adoption on July 1, 1939 of approving these institutions as schools of the basic medical sciences. The Council in giving its approval to these schools assumes no responsibility for the character of those courses which involve the use of clinical material.

TABLE 5.—*Recognized Schools of the Basic Medical Sciences in the United States and Canada*

Name and Location of School	1941-1942 Preliminary Requirement by Years	Students by Classes, Session 1940-1941 1st Year	2d Year	Totals	Applications for Admission to the 1st Year Will Be Received Until	Executive Officer	
ALABAMA							
1 University of Alabama School of Medicine, University (Tuscaloosa)	3	53	48	101	.....	Stuart Graves, M.D., Dean	1
MISSISSIPPI							
2 University of Mississippi School of Medicine, University	3	26	20	46	September	B. S. Guyton, M.D., Dean	2
MISSOURI							
3 University of Missouri School of Medicine, Columbia	3	40	43	83	August	Dudley S. Conley, M.D., Dean	3
NEW HAMPSHIRE							
4 Dartmouth Medical School, Hanover	3 & Degree	23	18	41	February	John P. Bowler, M.D., Dean	4
NORTH CAROLINA							
5 University of North Carolina School of Medicine, Chapel Hill	3	46	32	78	.....	W. Reece Berryhill, M.D., Acting Dean	5
6 Wake Forest College School of Medical Sciences, Wake Forest	3	36	30	66	September	C. C. Carpenter, M.D., Dean	6
NORTH DAKOTA							
7 *University of North Dakota School of Medicine, Grand Forks	3	26	21	47	September	H. E. French, M.D., Dean	7
SOUTH DAKOTA							
8 *University of South Dakota School of Medical Sciences, Vermillion	3	23	22	45	July	Joseph C. Ohlmacher, M.D., Dean	8
UTAH							
9 University of Utah School of Medicine, Salt Lake City	3	32	31	63	December	L. L. Daines, M.D., Dean	9
WEST VIRGINIA							
10 West Virginia University School of Medicine, Morgantown	3	26	19	45	September	Edward J. Van Liere, M.D., Dean	10
CANADA							
11 University of Saskatchewan School of Medical Sciences, Saskatoon, Sask.	2	24	25	49	May	W. S. Lindsay, M.B., Dean	11

* On probation since May 13, 1939.

Because of the existing national emergency, special sessions for senior medical students have been arranged in eleven schools to make possible completion of the course at an earlier date. These schools are named in table 8, together with data as to whether the schedule is required or optional, the date when these classes began, when they will end, and the date of graduation.

Four of the medical schools of Canada offer a five year course, four have a six year course, one offers four years and there is one school of the basic medical sciences. Three Canadian schools require an internship for graduation.

CURRICULUM

The standard curriculum recognized by the Council on Medical Education and Hospitals and contained in its Essentials of an Acceptable Medical School consists of from three thousand six hundred to four thousand

four hundred distributed as from nine hundred to one thousand hours a year and grouped under nine headings: anatomy, including histology and embryology; physiology; biochemistry; pathology, bacteriology and immunology; pharmacology; hygiene and sanitation; general medicine; general surgery, and obstetrics and gynecology. A certain percentage of hours of the whole number of hours in the courses is required in each of these groups.

TABLE 6.—*Requirements of Preliminary Training by Medical Licensing Boards*

Two Years or More of College		
Alabama	Louisiana	Oregon
Alaska	Maine	Pennsylvania
Arizona	Maryland	Puerto Rico
Arkansas	Michigan	Rhode Island
Colorado	Minnesota	South Carolina
Delaware	Mississippi	South Dakota
District of Columbia	Montana	Tennessee
Florida	Nevada	Texas
Georgia	New Hampshire	Utah
Hawaii	New Jersey	Vermont
Idaho	New Mexico	Virginia
Illinois	New York	Washington
Indiana	North Carolina	West Virginia
Iowa	North Dakota	Wisconsin
Kansas	Ohio	Wyoming
Kentucky	Oklahoma	
One Year of College		
California	Connecticut	
High School Graduation or Its Equivalent		
Massachusetts	Missouri	Nebraska

APPROVAL OF SCHOOLS IN CANADA

At a meeting in Ottawa, Ont., in 1937, at which representatives of the medical schools in Canada and the assistant secretary of the Canadian Medical Association were present, the secretary speaking for the Council on Medical Education and Hospitals discussed the survey of Canadian medical schools made during 1934-1936 and inquired as to the policy to be adopted in the future; that is, whether the American Medical Association should continue the grading of medical schools in Canada or whether they would prefer that the medical schools themselves or some other body take over this task. The problem was referred to the Canadian Medical Association. At its sixty-ninth annual meeting in June 1938 the Committee on Medical Education of the Canadian Medical Association brought in a report which was accepted by the members of the General Council of the Canadian Medical Association and reads, in part, as follows:

> In the event of the Council on Medical Education of the American Medical Association publishing a list of approved schools, those Canadian schools wishing their inspection and approval could request this inspection. This would leave each school free to deal directly with the Council on Medical Education of the American Medical Association and thus obviate misunderstandings. There seems to be a fairly uniform opinion expressed by the various medical schools in Canada that the Canadian Medical Association should share some responsibility in this country so far as medical education is concerned. The majority of the schools, however, feel that the aims and purposes of the Canadian Medical Association are not primarily those of undergraduate medical education, which is largely a problem of the schools themselves. However, it was recommended that, if the Council on Medical Education and Hospitals of the American Medical Association in the future conduct similar surveys at five or ten year intervals, such as the recent survey, the Canadian schools take advantage of and be included in this survey. Those schools which are members of the Association of American Medical Colleges could have a representative from this association included in the personnel of the inspection. The remaining schools which are not members of the Association of American Medical Colleges could ask to have a member of the Association of American Medical Colleges included in the inspecting personnel, or some representative from the Committee on Medical Education of the Canadian Medical Association.

It would appear from the foregoing that the approval of Canadian medical schools by the Council on Medical Education and Hospitals of the American Medical Association rests with the schools themselves. The Council on Medical Education and Hospitals at a meeting in St. Louis on May 13, 1939 voted that after Jan. 1, 1945 the Canadian medical schools will be included in the Council's classification only at their request.

MEDICAL SCHOOLS AND SCHOOLS OF THE BASIC MEDICAL SCIENCES

Medical schools and schools of the basic medical sciences approved by the Council on Medical Education and Hospitals during 1940-1941 are listed in tables 2 and 5, pages 686-687 and 689. In addition to the name and location of the schools there is recorded the preliminary college requirement for the coming session, the enrolment by classes during 1940-1941, including figures indicating the number of fifth year students interning or engaged in research, the total attendance, the number of graduates receiving the degree of Doctor of Medicine since July 1, 1940, the month until which applications for admission to the freshman class are received and the name of the dean or executive officer. Three schools on probation are indicated by an asterisk. Figures for the sixth year enrolment in Canadian schools are given in a footnote. The fifth year (internship) enrolment is not included in the column giving the total number of students by classes. Two schools discontinued the internship requirement affecting the class of 1941, i. e. the University of Cincinnati College of Medicine, where it has been permanently dropped, and the University of Illinois College of Medicine. At the latter school, because of the national emergency, the requirement was waived for those completing the senior year in 1941. The University of Cincinnati awarded degrees to 75 students who completed the course in 1940 and served internships during 1940-1941, and to 76 who completed four years work in 1941. The University of Illinois granted degrees to 164 students who completed the course in 1940 and served internships and to 138 who finished their four years of study in 1941. Duke University School of Medicine requires a two year internship after graduation, but one year of Army or Navy medical service is accepted in lieu of the second year of the internship. The two medical schools of the

TABLE 7.—*Medical Schools Which, by Eliminating Long Summer Vacations, Make Possible Completion of Course in Less than Forty-Four Consecutive Months*

	Freshmen Students Admitted	Advanced Students Admitted
Stanford University *	1 class a year	.....
University of Chicago	October	March and June
Northwestern University	September	Any quarter
University of Minnesota	September and January	.....
Duke University	October	.....
University of Tennessee	July, September, January, March	.....
University of Texas	.....	.....

* Plans indefinite.

University of Chicago do not report their students by classes, and in this tabulation, therefore, only the total enrolment is given.

The data presented in these tables constitute the basis also for several of the subsequent tabulations. Beginning on page 701 are given historical information and essential facts concerning the schools arranged by states.

TABLE 8.—*Senior Year Schedule Advanced to Make Possible Completion of the Course at an Earlier Date*

School	Required	Optional	Course Begins 1941	Course Ends 1942
College of Medical Evangelists	Yes	....	June 1	Feb. 28 *
George Washington	....	Yes	June 9	Feb. 22
Louisiana State University	Yes	....	June 16	Feb. 14
Tulane University	....	Yes	June 16	†
Boston University	....	Yes	June 8	March 1
Harvard Medical School	....	Yes	June 1	March 1
Tufts College	....	Yes	June 1	‡
Wayne University	....	Yes	June 30	Feb. 28
Columbia University	....	Yes	June 1	Feb.
University of Cincinnati	....	Yes	June 22	Feb. ‡
University of Pennsylvania	Yes	....	Sept. 2	May 1

* February 28 for one fourth of the class; May 31 for remainder.
† Permitted to finish work two months earlier but will graduate with the regular class.
‡ Will graduate with regular class in June.

Sixty-seven medical schools in the United States and nine faculties of medicine in Canada are listed in table 3, and ten schools of the basic medical sciences in the United States and one in Canada in table 5. All but three of these schools at the present time have the approval of the Council; the three on probation being the University of Arkansas School of Medicine since Dec. 4, 1938 and the medical schools of the universities of North Dakota and South Dakota since May 13, 1939.

The freshman enrolment in eighty-five medical schools of the United States and Canada (excluding the schools of the University of Chicago, which do not report by classes) for the session 1940-1941 was 6,452, sophomores 5,847, juniors 5,485, seniors 5,360, fifth and sixth year students 299 and 248, respectively. In the two medical schools of the University of Chicago 470 students were enrolled, making a total of 24,161 in the eighty-seven schools listed.

In the United States there were 5,837 freshmen, 5,254 sophomores, 4,969 juniors, 4,849 seniors and the 470 students of the University of Chicago, a total of 21,379 students enrolled in seventy-seven schools. The number of students studying medicine in the United States, including fifth or intern year students, was 22,437. The enrolment in the schools of the basic medical sciences in the United States numbered 615, of which 331 were freshmen and 284 sophomores.

The enrolment in the ten Canadian faculties of medicine included first year 615, second 593, third 516, fourth 511, fifth 299, and sixth year 248, a total of 2,782. In the one school of the basic medical sciences in Canada there were 49 students: 24 freshmen and 25 sophomores.

Students enrolled in institutions in the United States and Canada and working for the degree of Doctor of Medicine numbered 24,161, exclusive of 1,058 fifth year students in the United States interning or engaged in research and 156 Canadian students serving internships. In addition there were 132 part time and 299 special students and 1,167 others studying in medical schools.

The degree of Doctor of Medicine since July 1, 1940 has been awarded to 5,837 students; 5,275 received the degree from medical schools in the United States and 562 from Canadian faculties of medicine.

The schools of the basic medical sciences, with one exception, had an enrolment of less than 100. The lowest enrolment among the schools offering the complete course was 115 students at the Woman's Medical College of Pennsylvania and the highest 747 at the University of Toronto Faculty of Medicine. The high figure among schools in the United States was 616 at the University of Illinois College of Medicine.

Eight schools in the United States, exclusive of those of the basic medical sciences, matriculated less than 200 students, thirty-one between 201 and 300, thirteen from 301 to 400, ten from 401 to 500, and four from 501 to 600. One school matriculated more than 600. Among Canadian schools offering the entire medical course, one had an enrolment of less than 200, five between 201 and 300, two from 301 to 400 and one over 700. The smallest enrolment (41) was at Dartmouth Medical School, where 23 freshman and 18 sophomores were enrolled. This school does not offer the complete medical course.

Howard University College of Medicine graduated 22 students, the lowest number; Woman's Medical College of Pennsylvania, which had the lowest enrolment, 23 graduates. In the United States the University of Illinois College of Medicine granted the greatest number of degrees (302). This figure represents a double graduating class, since, because of the existing emergency, the internship was waived for the senior class of 1940-1941, representing 138 students. Fourteen schools granted degrees to classes of fewer than 50 students, thirty-eight graduated between 51 and 100 each, thirteen between 101 and 150, one between 151 and 200, and another more than 300. In Canada one school graduated more than a hundred students, while in four schools each there were between 51 and 100 graduates and also fewer than 50.

Of fifty-seven schools that replied to the inquiry regarding the month until which applications for admission to the first year class will be received, eighteen replied March, nine September, five each January, May, June and August, four each April and July, and two February.

BIRTHPLACE OF STUDENTS

In table 9 the birthplace of medical students of the United States and Canada in attendance during 1940-1941 is shown by schools. The state furnishing the greatest number of students, according to state of birth, was New York with 2,686, followed by Pennsylvania with 1,880, Illinois with 1,309 and Ohio with 1,085. Every state and the District of Columbia is represented in this table. From each of four states there was a student enrolment of between 701 and 1,000, and between 501 and 700, from five states 401 to 500, from seven states between 301 and 400, from nine states each 201 to 300 and 101 to 200, and from seven states less than 100. There were 208 born in the United States territories and possessions studying in fifty schools in the United States and two in Canada. In addition, 2,511 students of Canadian birth were also studying medicine, 127 of whom matriculated in forty-five schools in the United States and 2,384 in ten Canadian medical schools. Eighteen students of Canadian birth were registered at the College of Medical Evangelists, 10 at Wayne University College of Medicine and 7 at the University of Oregon Medical School. All other schools registered fewer than 7.

(Continued on page 694)

TABLE 9.—*Birthplace*

Marginal Number		Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	Dist. of Columbia	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan	Marginal Number
1	University of Alabama School of Medicine	73	..	..	..	..	1	..	..	3	2	..	2	..	..	..	1	..	..	..	1	1	1
2	University of Arkansas School of Medicine	1	..	183	..	..	..	..	..	2	4	..	5	3	..	6	3	6	..	..	1	1	2
3	University of California Medical School	2	..	..	111	3	2	1	1	..	..	4	12	2	3	1	..	1	..	..	1	1	3
4	College of Medical Evangelists	1	5	..	63	5	1	..	8	4	1	3	10	3	8	4	1	..	..	8	6	14	4
5	University of Southern California School of Medicine	..	1	1	74	7	..	..	..	..	..	..	6	4	3	2	..	..	..	..	1	6	5
6	Stanford University School of Medicine	1	2	1	139	2	2	..	1	..	..	1	6	1	2	4	..	..	..	..	1	..	6
7	University of Colorado School of Medicine	..	1	..	6	118	1	..	..	..	..	1	4	4	4	2	5	..	1	..	2	1	7
8	Yale University School of Medicine	1	..	..	5	4	45	..	..	..	2	..	4	..	2	3	1	1	..	7	10	3	8
9	Georgetown University School of Medicine	..	..	..	4	18	..	21	1	1	1	3	..	..	1	..	..	1	8	23	..	9	9
10	George Washington University School of Medicine	2	..	..	9	..	3	..	91	2	2	2	..	3	1	2	2	..	2	13	9	2	10
11	Howard University College of Medicine	3	1	..	3	..	2	1	18	2	6	..	2	3	1	1	2	6	1	7	3	..	11
12	Emory University School of Medicine	12	..	..	..	..	..	..	..	44	137	..	..	..	..	..	..	..	..	..	..	..	12
13	University of Georgia School of Medicine	3	..	..	..	1	1	..	..	2	157	..	1	..	..	..	..	..	..	1	..	..	13
14	Loyola University School of Medicine	..	..	1	7	1	3	1	..	1	..	..	133	8	6	..	..	1	1	1	2	10	14
15	Northwestern University Medical School	5	4	3	20	7	1	..	2	1	..	16	167	18	14	17	5	1	..	2	2	18	15
16	University of Chicago, Rush Medical College	1	1	1	4	2	2	..	..	1	..	10	27	5	7	3	1	..	..	1	2	4	16
17	University of Chicago, The School of Medicine	2	1	1	7	..	..	..	1	1	2	8	91	13	7	3	2	1	..	2	2	7	17
18	University of Illinois College of Medicine	2	..	..	1	..	1	..	..	..	..	..	499	10	6	2	2	1	..	..	1	8	18
19	Indiana University School of Medicine	..	..	..	..	..	..	..	..	..	..	..	2	445	..	..	..	..	..	..	..	..	19
20	State University of Iowa College of Medicine	..	..	..	..	1	1	..	..	2	..	..	9	2	222	1	..	..	..	..	2	3	20
21	University of Kansas School of Medicine	..	..	1	1	4	..	..	1	..	..	..	7	1	1	188	2	1	..	..	..	4	21
22	University of Louisville School of Medicine	6	2	2	7	1	3	..	..	1	2	3	7	25	3	1	143	..	1	1	2	2	22
23	Louisiana State University School of Medicine	4	..	1	5	..	..	..	..	2	2	1	3	..	1	..	3	250	..	..	..	..	23
24	Tulane University of Louisiana School of Medicine	51	4	9	1	2	1	..	..	48	11	..	..	..	..	2	16	130	..	..	..	1	24
25	Johns Hopkins University School of Medicine	3	..	..	10	1	6	1	8	5	5	1	10	3	1	3	4	2	7	50	12	4	25
26	University of Maryland School of Medicine	2	2	..	4	..	12	4	2	7	..	..	5	2	..	..	1	..	..	127	8	1	26
27	Boston University School of Medicine	..	..	..	1	..	7	..	..	..	..	..	..	2	..	..	1	..	15	..	115	..	27
28	Harvard Medical School	4	2	3	16	7	15	..	7	3	9	1	29	8	4	5	6	2	8	4	100	7	28
29	Tufts College Medical School	..	..	..	1	..	26	..	1	..	1	..	2	1	..	..	..	..	19	..	267	1	29
30	University of Michigan Medical School	1	..	..	5	4	2	..	2	2	3	2	18	8	6	3	2	1	1	..	7	244	30
31	Wayne University College of Medicine	1	1	..	..	1	2	..	..	..	..	..	6	2	3	..	1	..	..	..	5	160	31
32	University of Minnesota Medical School	..	..	..	..	2	..	..	..	..	..	2	8	3	8	1	..	..	..	..	1	2	32
33	University of Mississippi School of Medicine	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	33
34	University of Missouri School of Medicine	..	..	3	1	..	..	..	..	..	..	1	2	1	2	1	1	1	..	..	..	..	34
35	St. Louis University School of Medicine	1	1	2	18	4	5	..	..	..	..	4	59	9	7	7	3	..	2	..	7	10	35
36	Washington University School of Medicine	16	..	3	17	6	..	..	2	2	1	6	34	4	8	11	7	..	..	..	4	7	36
37	Creighton University School of Medicine	..	..	..	31	3	1	..	1	..	..	1	4	..	27	6	..	..	..	..	2	1	37
38	University of Nebraska College of Medicine	1	..	..	..	2	3	..	..	1	..	..	1	7	3	16	7	..	..	..	1	..	38
39	Dartmouth Medical School	..	..	..	1	..	4	1	1	1	..	..	2	..	..	..	..	..	..	..	5	2	39
40	Albany Medical College	..	..	..	..	1	5	1	..	..	..	..	2	..	..	..	..	..	..	..	10	..	40
41	Long Island College of Medicine	6	..	..	1	..	14	..	..	..	..	..	..	..	..	..	..	..	2	..	4	..	41
42	University of Buffalo School of Medicine	..	..	..	..	..	1	..	1	..	..	..	2	..	..	..	..	..	1	..	3	1	42
43	Columbia Univ. College of Physicians & Surgeons	5	1	1	5	5	15	..	4	1	4	2	7	4	1	1	..	1	5	1	30	1	43
44	Cornell University Medical College	..	1	..	9	1	9	..	5	4	1	..	..	..	2	1	1	..	5	..	19	1	44
45	New York Medical College	..	..	..	5	..	12	..	..	..	..	..	..	..	..	..	..	..	..	1	4	2	45
46	New York University College of Medicine	1	..	..	1	..	12	..	1	..	2	..	1	1	1	1	1	..	..	1	12	..	46
47	Univ. of Rochester School of Medicine and Dentistry	..	..	..	14	1	3	1	..	..	1	2	3	..	..	1	3	1	1	..	15	1	47
48	Syracuse University College of Medicine	..	..	..	..	..	3	..	..	..	1	3	..	..	1	1	..	..	1	1	4	..	48
49	University of North Carolina School of Medicine	..	..	..	1	..	1	..	..	1	..	..	2	..	..	..	..	..	1	..	..	..	49
50	Duke University School of Medicine	5	2	2	4	1	4	3	6	8	13	..	7	4	2	..	..	1	6	7	7	50	50
51	Wake Forest College School of Medical Sciences	2	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	..	..	1	..	51	51
52	University of North Dakota School of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	52
53	University of Cincinnati College of Medicine	3	..	..	8	3	1	1	..	..	..	1	7	14	1	..	24	..	1	..	..	6	53
54	Western Reserve University School of Medicine	1	..	..	5	..	2	..	1	..	..	2	6	2	3	1	2	..	1	..	5	9	54
55	Ohio State University College of Medicine	1	..	..	..	2	..	..	..	..	..	..	4	4	1	1	3	1	..	1	1	1	55
56	University of Oklahoma School of Medicine	4	1	6	2	3	..	..	..	..	..	..	5	4	5	10	..	..	..	..	1	2	56
57	University of Oregon Medical School	..	1	..	7	4	1	..	1	..	..	14	3	2	5	4	1	..	..	..	1	..	57
58	Hahnemann Medical Coll. and Hosp. of Philadelphia	4	3	2	5	..	10	3	1	1	2	..	9	2	4	..	..	..	..	3	19	3	58
59	Jefferson Medical College of Philadelphia	3	..	..	4	..	6	11	..	1	1	..	7	2	1	1	..	4	4	10	1	59	59
60	Temple University School of Medicine	1	1	..	3	1	5	3	..	7	2	3	4	1	2	1	..	1	1	4	6	5	60
61	University of Pennsylvania School of Medicine	9	1	..	2	..	1	3	1	1	4	3	4	4	4	1	4	..	8	3	5	..	61
62	Woman's Medical College of Pennsylvania	1	1	..	4	2	1	1	..	..	..	1	8	..	1	..	..	..	..	1	1	1	62
63	University of Pittsburgh School of Medicine	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	2	1	..	63
64	Medical College of the State of South Carolina	1	..	..	1	..	..	..	..	1	1	..	..	1	..	..	..	..	..	..	1	..	64
65	Univ. of South Dakota School of Medical Sciences	..	..	..	1	..	..	..	..	..	1	..	1	4	..	..	..	..	..	..	1	1	65
66	University of Tennessee College of Medicine	21	1	15	4	1	..	..	..	8	10	..	7	..	..	11	18	6	..	1	1	..	66
67	Meharry Medical College	10	..	4	..	..	1	1	8	10	22	..	2	..	..	2	3	3	..	2	2	..	67
68	Vanderbilt University School of Medicine	17	..	3	2	..	..	..	..	7	..	..	3	..	..	5	21	1	..	..	..	1	68
69	Baylor University College of Medicine	1	1	11	3	..	..	..	2	1	2	..	2	..	..	4	1	5	..	..	1	..	69
70	University of Texas Medical Branch	2	..	5	1	1	1	..	1	1	3	..	4	..	3	5	..	6	..	..	..	1	70
71	University of Utah School of Medicine	..	1	..	..	1	..	..	..	..	..	5	1	..	..	1	..	..	..	..	1	..	71
72	University of Vermont College of Medicine	..	..	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	5	..	9	..	72
73	University of Virginia Department of Medicine	7	2	..	..	1	1	3	3	4	..	..	..	..	..	2	..	..	..	2	2	..	73
74	Medical College of Virginia	..	1	..	4	1	..	2	4	1	3	..	1	1	..	..	4	..	..	5	1	..	74
75	West Virginia University School of Medicine	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	75
76	University of Wisconsin Medical School	1	..	..	1	1	..	..	..	..	..	3	14	1	5	3	2	..	..	..	3	5	76
77	Marquette University School of Medicine	..	1	..	16	2	1	..	2	..	..	2	8	1	3	1	..	1	..	1	2	20	77
78	University of Alberta Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	78
79	University of Manitoba Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	79
80	Dalhousie University Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	4	..	80
81	Queen's University Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	81
82	University of Western Ontario Medical School	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	2	82
83	University of Toronto Faculty of Medicine	..	..	..	..	..	1	..	..	..	..	1	1	1	..	..	..	..	..	1	1	1	83
84	McGill University Faculty of Medicine	..	..	..	10	1	2	..	1	..	1	1	3	1	..	1	..	1	..	..	15	1	84
85	University of Montreal Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	85
86	Laval University Faculty of Medicine	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	4	..	4	..	..	86
87	Univ. of Saskatchewan School of Medical Sciences	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	87
	Totals	306	47	265	718	215	286	36	208	187	445	112	1309	653	425	348	306	444	113	266	824	600	

of Students

Marginal Number	Minnesota	Mississippi	Missouri	Montana	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming	U. S. Territories and Possessions	Canada	Foreign	Totals	Marginal Number
1	..	1	1	..	..	1	..	1	..	3	..	..	1	..	..	3	..	..	..	3	1	..	..	2	..	..	..	..	..	1	..	101	1
2	2	2	3	..	..	..	..	4	1	25	..	..	1	8	..	1	..	1	..	7	9	1	..	1	..	..	..	..	..	1	4	226	2
3	6	..	4	2	7	1	..	3	..	20	..	1	10	1	5	3	1	..	..	..	2	6	..	..	6	..	2	..	1	4	9	239	3
4	8	1	1	3	6	..	..	2	..	16	1	4	5	7	8	5	..	1	2	2	6	1	..	4	15	1	3	..	7	18	26	298	4
5	6	1	6	5	5	1	..	1	1	9	..	3	5	2	5	8	1	..	3	..	5	5	..	..	..	..	4	3	1	3	7	201	5
6	2	..	2	1	3	1	..	2	..	8	..	4	3	3	3	5	..	..	..	2	10	..	..	13	..	1	1	1	2	3	9	240	6
7	4	..	8	4	5	..	..	4	..	5	..	..	2	..	1	2	..	..	2	1	4	4	..	..	..	..	2	6	1	..	2	204	7
8	1	..	3	2	..	..	2	13	1	29	..	1	4	..	..	16	11	..	1	..	2	..	..	1	4	2	1	..	2	..	9	206	8
9	2	..	..	1	..	..	5	32	..	88	4	1	6	..	2	45	13	1	1	..	..	1	1	..	3	2	1	..	7	..	8	306	9
10	1	..	1	..	..	..	1	17	..	14	4	..	7	1	1	13	..	..	2	1	3	8	1	16	5	4	4	1	5	..	5	260	10
11	1	2	1	..	..	..	..	12	..	24	5	..	5	1	..	12	1	1	..	..	1	..	..	15	..	2	..	..	3	..	3	151	11
12	..	5	..	..	..	..	..	..	..	1	7	..	..	..	..	..	..	..	..	2	..	..	..	1	..	..	..	1	..	1	..	1	218	12
13	..	..	1	..	..	..	..	1	..	..	..	..	1	1	..	1	..	5	..	1	1	..	..	..	..	1	1	..	..	..	..	179	13
14	4	..	1	3	2	1	..	7	..	22	..	..	21	..	..	15	..	..	1	..	..	..	..	..	..	2	..	3	..	2	3	8	270	14
15	14	1	17	17	10	2	..	6	3	4	..	9	31	5	..	9	..	1	15	..	2	15	..	1	36	5	22	5	4	5	14	556	15
16	6	1	11	4	4	..	2	..	1	7	3	14	4	3	1	5	..	..	13	..	1	16	..	..	5	7	18	..	3	..	11	212	16
17	2	2	2	6	5	..	..	6	2	9	2	1	8	5	2	3	2	..	8	..	1	6	..	1	15	1	10	3	1	1	3	258	17
18	5	2	6	1	1	..	..	4	1	12	1	..	4	..	..	6	1	..	1	..	1	..	..	..	1	..	5	1	..	6	24	616	18
19	..	..	..	..	..	..	..	1	..	7	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	..	458	19
20	5	..	4	1	3	..	..	1	..	2	..	1	3	..	..	3	..	..	4	..	3	..	..	..	..	..	2	2	..	1	8	286	20
21	2	..	42	..	3	..	..	..	..	2	..	..	5	10	..	1	..	..	1	..	2	..	..	..	1	1	3	..	1	2	2	289	21
22	1	1	2	9	..	1	..	1	1	20	1	..	29	2	2	5	2	2	1	2	1	13	..	1	9	9	8	..	3	3	5	345	22
23	1	4	2	..	..	..	..	3	..	21	1	..	..	1	..	..	..	..	5	..	2	9	4	..	..	..	..	..	1	4	..	2	338	23
24	..	66	5	..	..	..	..	7	4	19	6	1	14	..	..	..	11	..	4	50	..	..	..	2	..	..	1	8	..	9	..	483	24
25	3	3	4	3	..	..	1	12	..	34	10	2	5	..	..	22	..	6	1	4	5	2	..	5	1	4	4	..	2	3	10	283	25
26	1	2	..	1	..	..	1	23	1	28	20	..	9	..	1	34	1	2	1	3	..	2	..	5	..	30	1	..	24	..	5	309	26
27	..	..	1	..	..	..	4	2	..	22	..	..	..	..	1	1	7	..	..	..	..	..	..	1	1	3	..	..	3	2	3	198	27
28	12	3	20	3	5	1	4	11	..	62	15	2	23	..	4	28	16	1	2	8	5	5	2	2	11	3	5	..	5	2	28	528	28
29	..	..	..	..	..	..	14	6	1	9	..	1	2	..	2	1	16	..	..	..	..	..	5	..	2	..	..	..	1	1	6	386	29
30	5	..	2	7	1	..	..	10	..	23	2	2	30	2	2	12	1	2	2	1	3	2	1	4	6	3	3	..	11	2	10	460	30
31	4	..	3	..	..	..	..	1	..	11	..	1	10	..	..	10	..	..	..	4	..	1	..	..	..	..	3	..	..	10	7	248	31
32	327	..	4	11	4	..	..	3	..	7	..	17	..	1	1	..	..	..	6	..	..	1	..	..	12	..	18	..	1	6	5	451	32
33	..	38	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	46	33
34	..	..	63	..	1	..	..	..	..	2	1	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	83	34
35	6	1	61	10	3	3	..	10	3	53	1	1	48	4	2	24	5	1	2	1	5	3	..	1	7	2	6	..	8	4	7	421	35
36	6	3	106	2	3	2	..	4	2	16	5	2	7	3	4	2	..	..	3	1	4	8	1	3	13	2	5	2	4	1	9	351	36
37	4	..	6	4	36	..	..	5	..	15	..	3	7	..	6	1	..	..	10	1	7	2	..	..	14	..	4	3	3	1	..	223	37
38	4	..	6	3	239	1	..	..	..	..	..	1	2	1	1	..	..	..	..	4	..	1	1	..	2	..	..	4	..	1	3	317	38
39	..	..	..	..	1	..	8	4	..	6	..	..	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	41	39
40	..	..	1	..	..	..	2	9	..	99	..	..	1	..	1	2	..	1	..	..	..	..	..	3	..	..	..	..	..	1	1	140	40
41	..	..	..	..	..	..	1	49	..	277	1	..	2	..	..	5	..	..	..	1	1	..	..	1	..	..	..	..	..	..	..	365	41
42	..	..	1	..	..	..	..	2	..	210	..	..	12	13	..	16	1	..	..	..	..	..	..	..	2	..	..	..	..	2	8	266	42
43	4	1	5	1	..	3	3	37	2	192	2	..	6	..	..	20	6	..	..	3	5	3	2	5	4	..	2	..	..	4	9	411	43
44	..	..	2	1	..	..	..	44	..	148	4	..	6	..	1	13	4	..	2	2	2	..	..	1	1	1	2	..	..	..	..	294	44
45	..	..	..	..	1	..	..	61	..	205	..	1	4	..	..	6	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	305	45
46	2	..	5	..	1	1	3	50	..	334	3	..	4	..	..	22	1	..	..	..	..	1	..	1	..	1	1	..	2	2	30	499	46
47	2	..	2	..	1	..	..	10	..	92	1	1	20	..	..	8	..	1	..	..	1	1	2	3	2	..	..	1	..	2	5	252	47
48	1	..	..	..	..	..	1	5	1	121	..	..	1	..	..	11	..	..	..	..	1	..	1	..	..	..	1	..	..	..	5	164	48
49	1	..	..	..	..	..	..	1	..	2	59	..	..	..	..	..	..	7	1	..	..	..	..	2	..	..	..	..	..	..	..	78	49
50	2	..	3	3	..	..	..	16	..	16	47	..	9	1	2	14	..	25	..	3	1	..	..	15	4	12	..	..	1	..	6	262	50
51	1	..	1	..	..	..	..	1	..	3	50	..	..	..	..	..	..	1	..	1	..	..	..	2	..	..	..	..	..	..	..	66	51
52	8	..	..	2	..	..	..	..	..	..	..	33	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	1	..	..	47	52
53	..	..	4	..	..	1	..	4	1	13	1	..	191	..	..	10	..	..	..	..	..	..	..	..	1	3	2	..	2	1	2	306	53
54	1	..	..	..	..	..	..	3	..	9	..	..	183	..	2	21	1	..	2	..	1	..	..	..	1	8	1	..	1	1	7	282	54
55	1	..	..	..	2	..	..	2	..	6	..	..	230	2	..	11	..	..	..	..	2	..	..	1	..	11	..	..	..	..	6	295	55
56	1	3	10	..	4	..	..	..	..	6	..	..	1	143	..	4	..	..	..	1	15	..	..	..	..	..	1	..	1	1	1	235	56
57	7	..	2	10	2	..	..	1	1	..	..	3	2	1	92	1	..	..	4	1	..	3	..	..	63	1	1	..	1	8	3	248	57
58	3	2	..	..	..	1	5	62	..	54	2	..	21	..	2	271	5	..	..	1	3	1	1	1	5	..	..	18	1	13	544	58
59	..	1	2	1	..	..	1	55	..	4	27	..	15	..	1	302	8	5	..	3	..	..	..	4	11	..	..	9	..	3	503	59
60	..	..	3	1	2	1	3	35	..	22	13	9	11	2	..	229	..	2	1	..	3	10	..	1	6	9	2	..	8	2	9	433	60
61	4	1	7	..	2	..	..	33	..	26	14	4	10	1	1	260	1	2	..	3	5	7	..	2	6	14	4	2	3	1	15	486	61
62	2	..	2	..	..	1	..	7	..	23	2	..	5	1	..	30	..	..	..	..	..	1	..	..	1	..	..	..	5	1	11	115	62
63	..	..	..	..	..	..	..	..	..	..	..	..	6	..	..	272	..	..	..	..	..	..	..	..	1	4	..	..	..	1	1	291	63
64	..	..	..	..	..	..	..	1	..	1	5	..	..	..	..	..	..	157	..	..	..	..	..	..	..	2	..	..	..	..	1	173	64
65	2	..	..	1	2	..	..	..	..	..	..	..	5	1	..	..	..	..	..	20	..	1	..	..	1	..	..	..	2	..	1	45	65
66	1	65	19	..	1	..	..	..	..	4	6	2	..	15	4	1	..	1	2	191	18	6	..	2	8	..	1	2	1	3	4	461	66
67	..	14	2	..	..	..	..	3	1	5	15	..	5	..	..	10	..	14	..	13	23	..	..	15	..	2	..	..	2	..	16	216	67
68	1	9	6	1	..	..	..	2	..	4	6	1	2	3	..	4	2	10	1	66	8	..	..	5	2	3	2	1	..	2	..	206	68
69	..	8	6	1	..	..	..	3	3	..	1	..	3	17	1	4	..	1	..	2	214	..	..	..	..	2	..	1	..	1	3	306	69
70	..	1	4	..	..	..	..	..	2	3	2	..	1	1	..	2	1	1	1	2	318	..	..	1	1	1	..	..	..	..	6	382	70
71	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	50	..	..	..	..	1	..	..	..	..	63	71
72	..	..	..	..	1	..	5	2	..	8	..	..	4	..	..	..	..	..	1	..	..	..	79	..	..	..	..	..	..	3	2	124	72
73	..	..	..	..	..	..	..	7	..	8	8	..	2	..	..	2	..	2	..	4	1	..	1	171	1	12	..	..	2	..	2	250	73
74	3	1	3	1	..	..	..	7	..	24	31	..	5	1	..	6	..	2	..	2	1	..	1	123	..	43	1	..	8	1	3	295	74
75	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	..	40	..	..	..	..	45	75
76	5	..	1	1	2	..	..	..	..	2	1	1	3	..	1	3	..	..	2	1	..	1	..	..	1	1	181	..	1	4	7	258	76
77	19	..	1	4	..	1	..	1	1	37	..	4	10	..	1	15	1	..	..	..	1	..	..	2	14	2	110	1	15	2	11	312	77
78	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	189	78
79	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	201	79
80	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	145	80
81	1	..	..	1	..	..	..	..	..	8	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	235	81
82	..	..	..	..	..	..	..	1	..	7	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	199	82
83	2	..	1	..	..	..	1	..	1	9	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	605	83
84	..	..	..	1	1	..	12	3	..	27	5	..	4	..	..	5	3	..	..	1	2	1	3	2	5	1	..	..	..	..	..	239	84
85	..	..	..	..	..	..	..	5	..	1	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	193	85
86	..	..	..	..	..	..	4	2	..	20	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	275	86
87	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	46	87
	519	247	501	125	370	25	90	729	41	2086	396	138	1085	262	163	1880	115	280	123	350	758	206	100	424	321	809	455	41	238	2511	623	24,161	

TABLE 9.—*Birthplace*

Marginal Number		Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	Dist. of Columbia	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan	Marginal Number
1	University of Alabama School of Medicine	73	..	..	..	..	1	..	..	3	2	..	3	..	..	..	1	..	..	..	..	1	1
2	University of Arkansas School of Medicine	1	..	183	..	..	..	..	..	2	4	..	5	3	..	6	3	6	..	..	1	1	2
3	University of California Medical School	2	..	..	111	3	2	1	1	..	..	4	12	2	3	1	..	1	..	..	1	1	3
4	College of Medical Evangelists	1	5	..	63	5	1	..	8	4	1	3	10	3	8	4	1	..	..	8	6	14	4
5	University of Southern California School of Medicine	..	1	1	74	7	..	..	..	..	..	..	6	4	3	2	..	..	..	..	1	6	5
6	Stanford University School of Medicine	1	2	1	139	2	2	..	1	..	..	1	6	1	2	4	..	..	..	..	1	..	6
7	University of Colorado School of Medicine	..	1	..	6	118	1	..	..	..	..	1	4	4	3	5	..	1	..	..	2	1	7
8	Yale University School of Medicine	1	..	..	5	4	45	..	..	..	2	..	4	..	2	3	1	..	7	..	23	4	8
9	Georgetown University School of Medicine	..	..	..	4	..	18	..	21	1	1	1	3	..	..	1	..	..	1	8	23	..	9
10	George Washington University School of Medicine	2	..	..	9	..	3	..	91	2	2	2	..	3	1	2	2	..	2	13	9	2	10
11	Howard University College of Medicine	3	1	..	3	..	2	1	18	2	6	..	2	3	1	1	2	6	1	7	3	..	11
12	Emory University School of Medicine	12	..	..	..	..	..	..	..	44	137	..	..	..	..	..	..	..	..	..	..	..	12
13	University of Georgia School of Medicine	3	..	1	..	..	..	..	..	2	157	..	..	1	..	..	..	..	..	..	1	..	13
14	Loyola University School of Medicine	..	..	1	7	1	3	1	..	1	..	..	133	8	6	..	..	..	1	1	2	10	14
15	Northwestern University Medical School	5	4	3	20	7	1	..	2	1	..	16	167	18	14	17	5	1	..	2	2	18	15
16	University of Chicago, Rush Medical College	1	1	1	4	2	2	..	..	1	..	10	27	5	7	3	1	..	..	1	2	4	16
17	University of Chicago, The School of Medicine	2	1	1	7	..	..	..	1	1	2	8	91	13	7	3	2	1	..	2	2	7	17
18	University of Illinois College of Medicine	2	..	..	1	..	1	..	..	..	..	..	499	10	6	2	2	1	..	..	1	8	18
19	Indiana University School of Medicine	..	..	..	..	..	..	..	..	..	..	..	2	445	..	..	..	..	..	..	..	19	19
20	State University of Iowa College of Medicine	..	..	..	1	1	..	..	..	2	..	..	9	2	222	1	..	..	..	..	2	3	20
21	University of Kansas School of Medicine	..	..	1	1	4	..	..	1	..	..	..	7	1	1	188	2	1	..	..	..	4	21
22	University of Louisville School of Medicine	6	2	2	7	1	3	..	..	1	2	3	7	25	3	1	143	..	1	1	2	2	22
23	Louisiana State University School of Medicine	4	..	1	5	..	..	..	..	2	2	1	3	..	1	..	3	256	..	..	..	..	23
24	Tulane University of Louisiana School of Medicine	51	4	9	1	2	1	..	..	48	11	..	..	..	..	2	16	130	..	..	..	1	24
25	Johns Hopkins University School of Medicine	3	..	..	10	1	6	1	8	5	5	1	10	3	1	3	4	2	7	50	12	4	25
26	University of Maryland School of Medicine	2	2	..	4	..	12	..	4	2	7	..	5	2	..	..	1	..	127	8	1	26	
27	Boston University School of Medicine	..	..	..	1	..	7	..	..	..	..	..	..	2	..	..	1	..	15	..	115	..	27
28	Harvard Medical School	4	2	3	16	7	15	..	7	3	9	1	29	8	4	5	6	2	8	4	100	7	28
29	Tufts College Medical School	..	..	..	1	..	26	..	1	..	1	..	2	1	..	..	..	..	19	..	267	1	29
30	University of Michigan Medical School	1	..	..	5	4	2	..	2	2	3	2	18	8	6	3	2	1	..	7	244	30	
31	Wayne University College of Medicine	1	1	..	..	1	2	..	..	..	..	..	6	2	3	..	1	..	..	5	160	31	
32	University of Minnesota Medical School	..	..	..	..	2	..	..	..	..	..	2	8	3	8	1	..	..	..	..	1	2	32
33	University of Mississippi School of Medicine	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	33
34	University of Missouri School of Medicine	..	..	3	1	..	..	..	..	..	..	1	2	1	2	1	1	1	..	..	..	..	34
35	St. Louis University School of Medicine	1	1	2	18	4	5	..	..	..	4	59	9	7	7	3	..	2	..	7	10	35	
36	Washington University School of Medicine	16	..	3	17	6	..	..	2	2	1	6	34	4	8	11	7	..	..	..	4	36	
37	Creighton University School of Medicine	..	..	..	51	3	1	..	1	..	..	2	4	..	27	6	..	..	..	..	2	1	37
38	University of Nebraska College of Medicine	1	..	..	2	3	..	..	1	..	..	1	7	3	16	7	..	..	1	..	1	..	38
39	Dartmouth Medical School	..	..	..	1	..	4	1	1	1	..	..	2	..	..	..	..	..	..	..	5	2	39
40	Albany Medical College	..	..	..	..	1	5	1	..	..	..	..	2	..	..	..	..	..	..	..	10	..	40
41	Long Island College of Medicine	6	..	..	1	..	14	..	..	..	..	..	..	..	..	..	..	..	2	..	4	..	41
42	University of Buffalo School of Medicine	..	..	..	..	..	1	..	1	..	1	..	2	..	..	..	..	..	1	..	3	1	42
43	Columbia Univ. College of Physicians & Surgeons	5	1	1	5	..	15	..	4	1	4	2	7	4	1	1	..	1	5	1	30	1	43
44	Cornell University Medical College	..	1	..	9	1	9	..	5	4	1	..	..	2	1	1	..	5	..	18	1	44	
45	New York Medical College	..	..	..	5	..	12	..	..	..	..	..	..	..	..	..	..	..	..	1	4	2	45	
46	New York University College of Medicine	1	..	..	1	..	12	..	1	..	2	..	1	1	1	1	1	..	..	1	12	..	46
47	Univ. of Rochester School of Medicine and Dentistry	..	..	..	14	1	3	1	..	..	1	2	3	..	..	1	3	1	1	..	15	1	47
48	Syracuse University College of Medicine	..	..	..	..	..	3	..	..	..	..	1	3	..	1	1	..	..	..	1	4	..	48
49	University of North Carolina School of Medicine	..	..	..	1	..	1	..	1	1	..	..	..	..	..	..	..	1	1	..	..	..	49
50	Duke University School of Medicine	5	2	2	4	1	4	3	6	8	13	..	7	4	2	..	..	1	6	7	7	50	
51	Wake Forest College School of Medical Sciences	2	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	..	1	..	51
52	University of North Dakota School of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	52
53	University of Cincinnati College of Medicine	3	..	..	8	3	1	1	..	..	..	1	7	14	1	..	24	..	1	..	..	6	53
54	Western Reserve University School of Medicine	1	..	..	5	..	2	..	1	..	..	2	6	2	3	1	2	..	1	..	5	9	54
55	Ohio State University College of Medicine	1	..	..	..	2	..	..	..	..	..	..	4	4	1	1	3	1	..	1	1	1	55
56	University of Oklahoma School of Medicine	4	1	6	2	3	..	..	..	..	..	..	5	4	5	10	..	..	..	..	1	2	56
57	University of Oregon Medical School	..	1	..	7	4	1	..	1	..	..	14	3	2	5	4	1	..	..	..	1	..	57
58	Hahnemann Medical Coll. and Hosp. of Philadelphia	4	3	2	5	..	10	3	1	1	2	..	9	2	4	..	..	..	1	3	19	3	58
59	Jefferson Medical College of Philadelphia	3	..	..	4	..	6	11	..	..	1	1	..	7	2	1	1	..	4	4	10	1	59
60	Temple University School of Medicine	1	1	..	3	1	5	3	..	7	2	3	4	1	2	1	..	1	1	4	6	5	60
61	University of Pennsylvania School of Medicine	9	1	..	2	..	1	3	1	1	4	3	4	4	4	1	4	..	8	3	5	..	61
62	Woman's Medical College of Pennsylvania	1	1	..	4	2	1	1	..	..	..	1	8	..	1	..	..	..	..	1	1	1	62
63	University of Pittsburgh School of Medicine	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	2	1	..	63
64	Medical College of the State of South Carolina	1	..	..	1	..	..	..	..	1	1	..	..	1	..	..	..	..	..	..	1	..	64
65	Univ. of South Dakota School of Medical Sciences	..	..	..	1	..	..	..	..	..	..	..	..	1	4	..	..	..	..	..	..	1	65
66	University of Tennessee College of Medicine	21	1	15	4	1	..	..	..	8	10	..	7	..	..	11	18	6	..	1	1	..	66
67	Meharry Medical College	10	..	4	..	..	1	1	8	10	23	..	2	..	..	2	3	8	..	2	2	..	67
68	Vanderbilt University School of Medicine	17	..	3	2	..	..	..	..	5	7	..	3	..	..	5	21	1	..	..	..	1	68
69	Baylor University College of Medicine	1	1	11	3	..	..	..	2	1	2	..	2	..	..	4	1	5	..	..	1	..	69
70	University of Texas Medical Branch	2	..	5	1	1	1	..	1	1	3	..	4	..	3	5	..	6	..	..	..	1	70
71	University of Utah School of Medicine	..	1	..	..	1	..	..	..	..	..	5	1	..	..	1	..	..	..	..	1	..	71
72	University of Vermont College of Medicine	..	..	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	5	..	9	..	72
73	University of Virginia Department of Medicine	7	2	..	..	..	1	1	3	3	4	..	..	..	..	..	2	..	..	2	2	..	73
74	Medical College of Virginia	..	1	..	4	1	..	2	4	1	3	..	1	1	..	..	4	..	..	5	1	..	74
75	West Virginia University School of Medicine	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	75
76	University of Wisconsin Medical School	1	..	..	1	1	..	..	..	..	..	3	14	1	5	3	2	..	..	..	3	5	76
77	Marquette University School of Medicine	..	1	..	16	2	1	..	2	..	..	2	8	1	3	1	..	1	1	..	2	20	77
78	University of Alberta Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	78
79	University of Manitoba Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	79
80	Dalhousie University Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	4	..	80
81	Queen's University Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	81
82	University of Western Ontario Medical School	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	2	82
83	University of Toronto Faculty of Medicine	..	..	..	..	..	1	..	..	..	..	..	1	1	1	..	..	..	..	1	1	1	83
84	McGill University Faculty of Medicine	..	..	..	10	1	2	..	1	..	1	1	3	1	..	1	..	1	..	..	15	1	84
85	University of Montreal Faculty of Medicine	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	85
86	Laval University Faculty of Medicine	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	4	..	4	..	86	
87	Univ. of Saskatchewan School of Medical Sciences	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	87
	Totals	306	47	265	718	215	286	36	208	187	445	112	1309	653	425	348	306	444	113	266	824	650	

of Students

Marginal Number	Minnesota	Mississippi	Missouri	Montana	Nebraska	Nevada	New Hampshire	New Jersey	New Mexico	New York	North Carolina	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	South Carolina	South Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming	U. S. Territories and Possessions	Canada	Foreign	Totals	Marginal Number
1	..	1	1	..	..	1	..	1	..	3	..	..	..	..	..	3	..	..	..	3	1	..	..	2	..	..	..	..	..	1	..	101	1
2	2	2	3	..	..	..	..	4	1	25	..	..	1	8	..	1	..	1	..	7	9	1	1	..	..	..	..	..	..	1	4	266	2
3	6	..	4	2	7	1	..	3	..	20	..	1	10	1	5	3	1	..	..	..	2	6	..	..	6	..	2	..	1	4	9	239	3
4	8	1	1	3	6	..	..	2	..	16	1	4	5	7	8	5	..	1	2	2	6	1	..	4	15	1	3	..	7	18	26	298	4
5	6	1	6	5	5	1	..	1	1	9	..	3	5	2	5	8	1	..	3	..	5	5	..	..	6	..	4	3	1	3	7	201	5
6	2	..	2	1	..	3	1	..	2	8	..	4	2	3	3	5	..	..	..	2	10	..	..	13	..	1	1	2	3	9	240	6
7	4	..	8	4	5	..	..	3	4	5	..	..	2	..	1	2	..	..	2	1	4	4	..	..	..	..	2	6	1	..	2	204	7
8	1	..	3	2	..	..	2	13	1	29	..	1	4	..	..	16	11	..	1	..	2	..	..	1	4	2	1	..	2	..	9	256	8
9	2	..	3	1	..	..	5	32	..	88	4	1	6	..	2	45	13	1	1	..	..	1	..	..	3	2	1	..	7	8	306	9
10	1	..	1	..	..	..	1	17	..	14	4	..	7	1	1	13	..	..	2	1	3	8	1	16	5	4	4	1	5	..	5	260	10
11	1	2	1	..	..	..	..	12	..	24	5	..	5	1	..	12	1	1	..	..	1	..	..	15	..	2	..	..	3	..	3	151	11
12	..	5	..	..	..	..	..	..	..	1	7	..	..	..	..	..	..	..	..	2	..	..	..	1	..	..	..	..	1	..	1	218	12
13	..	..	1	..	..	..	..	1	..	..	..	..	1	1	..	1	..	5	..	1	1	..	..	..	..	1	1	..	..	..	..	179	13
14	4	..	1	3	2	1	..	7	..	22	..	..	21	..	..	15	..	..	..	..	..	..	..	..	2	..	3	..	..	3	8	270	14
15	14	1	17	17	10	2	..	6	3	4	..	9	31	5	..	9	1	15	..	2	15	..	1	36	5	22	5	4	5	14	556	15
16	6	1	11	4	4	..	2	..	1	7	3	14	4	3	1	5	..	13	..	1	16	..	..	5	7	18	..	3	..	11	212	16
17	2	2	2	6	5	..	..	6	2	9	2	1	8	5	2	3	2	..	8	..	1	6	..	1	15	1	10	3	1	1	3	258	17
18	5	2	6	1	1	..	..	4	1	12	1	..	4	..	..	6	1	..	1	..	1	..	..	..	1	..	5	1	..	6	24	616	18
19	..	..	..	..	..	..	..	1	..	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	458	19
20	5	..	4	1	3	..	..	1	..	2	..	1	3	..	..	3	..	..	4	..	3	..	..	..	..	2	2	..	1	8	286	20
21	2	..	42	3	..	..	..	..	..	2	..	..	5	10	..	1	..	..	1	..	1	1	3	..	1	1	3	..	1	2	2	289	21
22	1	2	9	..	1	..	..	1	1	20	1	..	29	2	2	5	2	2	1	2	1	13	..	1	9	9	8	..	3	3	5	345	22
23	1	4	2	..	..	..	..	3	..	21	1	..	..	1	..	..	..	5	..	2	9	4	..	..	..	..	..	1	4	..	2	338	23
24	..	66	5	..	..	..	..	7	4	19	6	..	1	14	..	..	..	11	..	4	50	..	..	2	..	..	..	1	8	..	9	483	24
25	3	3	4	3	..	..	1	12	..	34	10	2	5	..	..	22	..	6	1	4	5	2	..	5	1	4	4	..	2	3	10	282	25
26	1	2	..	1	..	..	1	20	1	28	20	..	9	..	1	34	1	2	1	3	..	2	..	5	..	30	1	..	24	..	5	309	26
27	..	..	1	..	..	1	4	2	..	23	..	..	..	..	1	7	..	..	..	..	..	..	1	1	3	..	..	..	3	2	3	193	27
28	12	3	20	3	5	1	4	11	..	62	15	2	23	..	4	28	16	1	2	8	5	5	2	2	11	3	5	..	5	2	28	528	28
29	..	..	..	..	..	..	14	6	1	9	..	1	2	..	2	1	16	..	..	..	..	..	5	..	2	..	..	..	1	1	6	386	29
30	5	..	4	1	3	..	..	1	..	2	..	1	3	..	..	3	..	..	4	..	3	..	..	..	..	2	2	..	1	8	286	30
31	2	..	42	3	..	..	..	..	..	2	..	..	5	10	..	1	..	..	1	..	1	1	3	..	1	1	3	..	1	2	2	289	31
32	1	2	9	..	1	..	..	1	1	20	1	..	29	2	2	5	2	2	1	2	1	13	..	1	9	9	8	..	3	3	5	345	32
33	1	4	2	..	..	..	..	3	..	21	1	..	..	1	..	..	..	5	..	2	9	4	..	..	..	..	..	1	4	..	2	338	33
34	..	66	5	..	..	..	..	7	4	19	6	..	1	14	..	..	..	11	..	4	50	..	..	2	..	..	..	1	8	..	9	483	34
35	6	1	61	10	3	3	..	10	3	53	1	1	48	4	2	24	5	1	2	1	5	3	..	1	7	2	6	..	8	4	7	421	35
36	6	3	106	2	3	2	..	4	2	16	5	2	7	3	4	2	..	..	3	1	4	8	1	3	13	2	5	2	4	1	9	351	36
37	4	..	6	4	36	..	..	5	..	15	..	3	7	..	6	1	..	..	10	..	1	2	..	..	14	..	4	3	3	1	..	223	37
38	4	..	6	3	239	1	..	..	..	..	..	1	2	1	1	..	..	..	4	..	1	1	..	..	2	..	..	4	..	1	3	317	38
39	..	..	..	..	1	..	8	4	..	6	..	..	2	..	..	..	..	..	..	..	..	..	1	1	..	..	1	..	..	1	..	41	39
40	..	..	1	..	2	9	..	9	..	99	..	..	1	..	1	2	1	..	..	..	..	..	3	..	..	..	..	..	..	1	1	140	40
41	..	..	..	..	..	..	1	49	..	277	1	..	2	..	..	5	..	..	1	1	..	..	1	..	..	..	..	..	..	..	..	365	41
42	..	..	1	..	..	..	..	2	..	210	..	..	13	..	..	18	1	..	..	..	..	..	..	..	2	..	..	..	..	2	8	286	42
43	4	1	5	1	..	3	3	37	2	192	2	1	6	..	..	20	6	..	3	5	3	2	5	4	..	2	..	2	4	9	411	43
44	..	..	2	1	..	..	..	44	..	148	4	..	6	..	1	13	4	..	2	2	2	..	1	1	1	2	..	2	..	..	..	291	44
45	..	..	..	1	..	..	..	61	..	205	..	1	4	..	..	6	..	..	1	..	..	..	1	..	1	..	1	..	..	..	..	336	45
46	2	..	5	..	1	1	3	50	..	334	3	..	4	..	..	22	1	..	..	..	1	..	..	1	..	1	1	2	2	39	499	46
47	2	..	2	..	1	..	..	10	..	92	1	1	20	..	..	8	..	1	..	..	1	1	2	3	2	..	..	1	..	2	5	252	47
48	1	..	..	..	..	..	1	5	1	121	..	..	1	..	..	11	..	..	..	..	1	..	1	..	..	..	1	..	..	..	5	164	48
49	..	..	..	..	..	..	..	1	..	2	59	..	..	..	..	..	..	7	..	1	..	..	..	2	..	..	..	..	..	..	..	78	49
50	2	..	3	3	..	..	..	16	..	16	47	..	9	1	2	14	..	25	..	3	1	..	..	15	4	12	..	..	1	..	6	262	50
51	1	..	1	..	..	..	..	1	..	3	50	..	..	..	..	..	..	1	..	1	..	..	..	2	..	..	..	..	..	..	..	66	51
52	8	..	..	2	..	..	..	..	..	..	..	33	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	47	52
53	..	..	4	..	..	1	1	4	1	13	..	..	191	..	..	10	..	..	..	..	..	..	..	..	1	3	2	..	2	1	2	306	53
54	1	..	..	..	..	..	..	3	..	9	..	..	183	..	2	21	1	..	2	..	1	..	..	..	1	8	1	..	1	1	7	282	54
55	1	..	1	..	2	..	..	2	..	6	..	..	230	2	..	11	..	..	..	..	2	..	..	1	..	11	..	..	..	..	6	295	55
56	1	3	10	..	4	..	..	..	..	6	..	..	1	143	..	4	..	..	..	1	15	..	..	..	..	..	1	1	1	1	235	56
57	7	..	2	10	2	..	..	1	1	..	..	3	2	1	92	1	..	..	4	1	..	3	..	..	65	1	1	..	1	8	3	248	57
58	3	2	..	..	..	1	5	62	..	54	2	..	21	..	2	271	5	..	..	..	1	3	1	1	1	5	..	18	1	13	544	58
59	..	1	2	1	..	..	1	55	..	4	27	..	15	..	1	302	8	5	..	3	..	..	..	..	4	11	..	..	9	..	3	503	59
60	..	..	3	1	2	1	3	35	..	22	13	9	11	2	..	229	..	2	1	..	3	10	..	1	6	9	2	..	8	2	9	435	60
61	4	1	7	..	2	..	..	33	..	26	14	4	10	1	1	260	1	2	..	3	5	7	..	2	6	14	4	2	3	1	15	486	61
62	2	..	2	..	..	1	..	7	..	23	2	..	5	1	..	30	..	..	..	..	..	1	..	..	1	..	..	5	1	11	115	62
63	..	..	..	..	..	..	..	..	..	..	..	..	6	..	..	272	..	..	..	1	..	..	..	..	1	4	..	..	..	1	1	291	63
64	..	..	..	..	..	..	..	1	..	1	5	..	..	..	..	..	..	157	..	..	..	..	..	..	..	2	..	..	..	..	1	173	64
65	2	..	..	1	2	..	..	..	..	..	..	..	5	1	..	..	..	..	20	..	1	..	..	..	1	..	..	..	2	..	1	45	65
66	1	65	19	..	1	..	..	..	..	4	6	2	..	15	4	1	..	1	2	191	18	6	..	2	8	..	1	2	1	3	4	461	66
67	..	14	2	..	..	..	..	3	1	5	15	..	5	..	..	10	..	14	..	13	23	..	..	15	..	2	..	..	2	..	16	216	67
68	1	9	6	1	..	..	..	2	..	4	6	1	2	3	..	4	2	10	1	66	8	..	..	5	2	3	2	1	..	..	2	206	68
69	..	8	6	1	..	..	..	3	3	..	1	..	3	17	1	4	..	1	..	2	214	..	..	..	..	2	1	1	..	1	3	306	69
70	..	1	4	..	..	..	..	..	2	3	2	..	1	1	..	2	1	1	1	2	318	..	..	1	1	1	..	..	..	..	6	382	70
71	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	50	..	..	..	..	1	..	..	..	..	63	71
72	..	..	..	..	1	..	5	2	..	8	..	..	4	..	..	..	..	..	..	..	..	..	79	..	..	..	..	..	..	3	2	124	72
73	..	..	..	..	..	..	..	7	..	8	8	..	2	..	..	2	..	2	1	4	1	..	1	171	1	12	..	..	2	..	2	250	73
74	3	1	3	1	..	..	..	7	..	24	31	..	5	1	..	6	..	2	..	2	1	..	1	123	..	43	1	..	8	1	3	295	74
75	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	..	40	..	..	..	..	45	75
76	5	..	1	1	2	..	..	..	..	2	1	1	3	..	1	3	..	..	2	1	..	1	..	..	1	1	181	..	1	4	7	258	76
77	19	..	1	4	..	1	..	1	1	37	..	4	10	..	1	13	1	..	..	..	1	..	..	2	14	2	110	1	15	2	11	312	77
78	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	189	9	201	78
79	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	201	11	217	79
80	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	145	25	177	80
81	1	..	..	1	..	..	..	..	..	8	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	235	17	266	81
82	..	..	..	..	..	..	..	1	..	7	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	199	8	282	82
83	2	..	1	..	..	..	1	..	1	9	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	665	58	747	83
84	..	..	..	1	1	..	12	3	..	27	5	..	4	..	..	5	3	..	..	1	2	1	3	2	5	1	..	..	..	..	239	32	385	84
85	..	..	..	..	..	..	..	5	..	1	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	193	3	203	85
86	..	..	..	..	..	..	4	2	..	20	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	275	3	315	86
87	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	46	1	49	87
	519	247	501	125	370	25	90	729	41	2686	396	138	1085	263	163	1880	115	280	123	350	758	206	106	424	321	869	455	41	208	2511	623	24,161	

(Continued from Page 691)

Students born in New York were enrolled in all but ten schools and in every state with the exception of Mississippi, North Dakota, Oregon, South Dakota, Utah and West Virginia. Students from New York were registered in two of the six provinces of Canada having medical schools. None were studying in Alberta, Manitoba, Nova Scotia or Saskatchewan. Pennsylvania was represented in all but eleven states and four provinces.

There were 729 students born in New Jersey, which has no medical school, admitted to sixty-three schools, while 321 from the state of Washington, which likewise has no medical school, enrolled in forty-eight schools. From the twelve states in which no medical schools are located there were 1,892 students in at least sixty-three schools as follows:

	Enrolled	No. of Schools
Arizona	47	29
Delaware	36	17
Florida	187	38
Idaho	112	35
Maine	113	34
Montana	125	38
Nevada	25	17
New Jersey	729	63
New Mexico	41	24
Rhode Island	115	27
Washington	321	48
Wyoming	41	19
	1,892	

Students of foreign birth were enrolled in sixty-three of the seventy-seven medical schools of the United States and in every Canadian school. There were 623 so enrolled, 456 in the United States and 167 in Canada. Thirty were so registered at New York University College of Medicine, 28 at Harvard Medical School and 26 at the College of Medical Evangelists. Other schools registered fewer than 16. It may be presumed that many of these students are now citizens of the United States.

TABLE 10.—*Students Classified by Birthplace*

	Schools	Attending School in State of Birth	Birth Place Elsewhere
Alabama	1	73	28
Arkansas	1	183	163
California	4	387	591
Colorado	1	118	86
Connecticut	1	45	161
District of Columbia	3	139	587
Georgia	2	294	103
Illinois	5	917	995
Indiana	1	445	13
Iowa	1	222	64
Kansas	1	188	101
Kentucky	1	143	202
Louisiana	2	386	435
Maryland	2	177	474
Massachusetts	3	482	625
Michigan	2	404	304
Minnesota	1	327	124
Mississippi	1	38	8
Missouri	3	230	625
Nebraska	2	275	265
New Hampshire	1	8	33
New York	9	1,678	968
North Carolina	3	156	250
North Dakota	1	33	14
Ohio	3	604	279
Oklahoma	1	143	92
Oregon	1	92	156
Pennsylvania	6	1,364	1,015
South Carolina	1	157	16
South Dakota	1	20	25
Tennessee	3	270	613
Texas	2	532	156
Utah	1	50	13
Vermont	1	79	45
Virginia	2	294	251
West Virginia	1	40	5
Wisconsin	2	391	279
Canada	10	2,284	398
Totals	87	13,659	10,502

In the United States 11,275 students were attending school in the state of their birth and 9,104, 45 per cent, elsewhere. Eliminating the 1,892 students from states which have no medical school, there are still 7,212 students who, though born in a state which had a medical school, are studying elsewhere.

While a perusal of table 10 will show many instances wherein the number studying elsewhere far exceeds the number attending school in the state of birth, it also shows some states in which the contrary is the case, notably Arkansas, Georgia, Indiana, Iowa, Minnesota, Ohio, South Carolina and Texas.

In Canada 398 of the 2,782 students were born outside the dominion.

It should not be inferred that every medical student enrolled in a state other than that of his birth is still a resident of his natal state. Still less should it be assumed that every one of these students has become a legal resident of the state in which his professional studies are pursued.

RESIDENT AND NONRESIDENT STUDENTS

Table 11 gives for each medical school in the United States the number of resident and nonresident students according to the individual school's definition of the word "resident." There is a wide variation in the definition of this term among both state universities and other schools. In some universities this is determined by the legal or permanent residence of the student, parents or guardian only, while in some schools continuous residence for from six months to one, two or three years just prior to the student's application for enrolment is also required. Other schools require the student to be a voter; that the parents' home in the state be established prior to the beginning of premedical work; the student to be a taxpayer or a dependent of a taxpayer, regardless of whether he resides in the state, while other schools require the student to be self supporting. In a few schools each case is determined by an attorney after consideration of birth, citizenship, residence of parents and so on. Most commonly residence is determined by ascertaining whether the student's parents or guardian has been a bona fide resident for a period of not less than six months. Among medical schools of other than state universities a residence is defined for the most part by the home address of the student or the legal residence of the parents or guardian.

The sixty-seven approved medical schools and the ten approved schools of the basic medical sciences reported 13,278 resident and 8,101 nonresident students. The state university enrolling the greatest number of nonresidents was the University of Tennessee College

of Medicine, which had 218 resident and 243 nonresident students, while at the Universities of Georgia, Illinois, Missouri and West Virginia nonresidents were not registered.

Among other than state universities, it will be noted, there are many schools which select their students from

TABLE 11.—*Resident and Nonresident Students*

	Resident Students	Nonresident Students	Totals
University of Alabama	87	14	101
University of Arkansas	229	57	286
University of California	234	5	239
College of Medical Evangelists	116	182	298
University of Southern California	190	11	201
Stanford University	198	42	240
University of Colorado	183	21	204
Yale University	54	152	206
Georgetown University	27	279	306
George Washington University	91	169	260
Howard University	18	133	151
Emory University	137	81	218
University of Georgia	179	...	179
Loyola University	133	137	270
Northwestern University	207	349	556
Rush Medical College	32	180	212
University of Chicago, The School of Medicine	94	164	258
University of Illinois	616	...	616
Indiana University	445	13	458
State University of Iowa	280	6	286
University of Kansas	275	14	289
University of Louisville	161	184	345
Louisiana State University	254	84	338
Tulane University of Louisiana	130	353	483
Johns Hopkins University	71	211	282
University of Maryland	158	211	369
Boston University	123	70	193
Harvard Medical School	110	418	528
Tufts College	295	91	386
University of Michigan	328	132	460
Wayne University	218	30	248
University of Minnesota	406	45	451
University of Mississippi	45	1	46
University of Missouri	83	...	83
St. Louis University	72	349	421
Washington University	121	230	351
Creighton University	36	187	223
University of Nebraska	302	15	317
Dartmouth Medical School	8	33	41
Albany Medical College	100	40	140
Long Island College of Medicine	277	88	365
University of Buffalo	210	56	266
Columbia University	198	213	411
Cornell University	149	145	294
New York Medical College	205	100	305
New York University	373	126	499
University of Rochester	114	88	202
Syracuse University	121	43	164
University of North Carolina	59	19	78
Duke University	61	201	262
Wake Forest College	56	10	66
University of North Dakota	46	1	47
University of Cincinnati	191	115	306
Western Reserve University	208	74	282
Ohio State University	294	1	295
University of Oklahoma	224	11	235
University of Oregon	152	96	248
Hahnemann Medical College	293	251	544
Jefferson Medical College	302	206	508
Temple University	251	184	435
University of Pennsylvania	280	206	486
Woman's Medical College	40	75	115
University of Pittsburgh	286	5	291
Medical College of South Carolina	157	16	173
University of South Dakota	34	11	45
University of Tennessee	218	243	461
Meharry Medical College	10	206	216
Vanderbilt University	76	130	206
Baylor University	269	37	306
University of Texas	380	2	382
University of Utah	58	5	63
University of Vermont	100	24	124
University of Virginia	172	78	250
Medical College of Virginia	150	145	295
West Virginia University	45	...	45
University of Wisconsin	241	17	258
Marquette University	132	180	312
Totals	13,278	8,101	21,379

among the residents of the state. This is particularly significant at the Universities of Southern California, Stanford, Tufts, Long Island and Baylor. The enrolment in municipally controlled medical schools consisted largely of resident students.

Figures indicating enrolment of resident and nonresident students for five years, beginning with the academic year 1936-1937, are shown in table 12. The figures do not vary to any measurable extent.

The ten faculties of medicine of Canada, including one offering courses in the basic medical sciences, reported 1,890 residents and 892 nonresident students. The definition of a resident by these schools varied from students whose permanent address is within one of the provinces of Canada, or the specific province in which the school is located, to home address on registration and taxpayers. The greatest number of nonresidents in any one school was reported by McGill University Faculty of Medicine. This school obtains a large portion of its student body from the United States.

The figures in tables 11 and 12 giving the number of residents and nonresidents and the preceding one classifying students by birthplace shows a divergence. More than 1,000 students born outside the state have been classified as residents. Excluding Canadian registration given in tables 9 and 10, there were 11,275 attending school in the state of their birth and 9,104

TABLE 12.—*Resident and Nonresident Students, 1936-1940*

	Resident	Nonresident	Totals
1936-1937	14,026	8,069	22,095
1937-1938	13,518	8,069	21,587
1938-1939	13,418	7,884	21,302
1939-1940	13,292	7,979	21,271
1940-1941	13,278	8,101	21,379

elsewhere, as compared with 13,278 whose legal residence is in the state in which they are pursuing their medical courses and 8,101 classified as nonresidents.

Comparing the figures for Canada in table 10 reveals somewhat similar results: 2,384 born in Canada and 398 elsewhere, while there were 1,890 residents and 892 nonresidents.

SCHOOLS, STUDENTS AND GRADUATES BY STATES

The number of schools, students and graduates by states are shown in table 13. Medical schools are located in thirty-six states and the District of Columbia. New York, with the largest number of schools, nine, had the greatest number of students (2,646) and 617 graduates, respectively. Pennsylvania with six schools had 2,379 students and 565 graduates; Illinois with five schools 1,912 students and 679 graduates ranks third, while Massachusetts with three schools, 1,107 students and 260 graduates completes the group of states having an enrolment of more than 1,000, although California had just under 1,000 students, 978 students and 253 graduates respectively.

In the seventy-seven schools, including those that offer courses in the basic medical sciences only, there were 21,379 students and 5,275 graduates. Students interning as a requirement for the degree, fifth year students, are not included in this tabulation. Neither are part time, special or other students pursuing courses in medical schools not leading to the M.D. degree.

The greatest number of graduates in any one state was 679 who completed their course in Illinois. There were 617 from New York schools and 565 from schools in Pennsylvania. Four other states had more than 200 graduates—California, Massachusetts, Ohio and Tennessee. Ten states had more than 100 but less than 200 graduates. Seven states had no graduates, as the medical schools located therein do not offer the complete medical course. All others had less than 100, the lowest being 31 who received their degrees from the one medical school in Vermont.

The status of two medical schools will change in the future.

Undergraduate courses at Rush Medical College will terminate in June 1942, when the students now enrolled will complete their courses. For the session 1941-1942 only senior students will be enrolled. Rush Medical College has formed an affiliation with the University of Illinois, and its clinical facilities will after June 1942 be available to the university for purposes of graduate and undergraduate instruction.

On Aug. 4, 1939 the board of trustees of Wake Forest College accepted the resources of the Bowman Gray Foundation in Winston-Salem. The medical school of Wake Forest College was moved to Winston-Salem in the summer of 1941 and will be known as the Bowman-Gray School of Medicine of Wake Forest College. The school is planning to offer a complete medical course beginning with the session 1942-1943.

TABLE 13.—*Schools, Students and Graduates by States* *

	Schools	Students	Graduates
Alabama	1	101	...
Arkansas	1	286	70
California	4	978	253
Colorado	1	204	45
Connecticut	1	206	51
District of Columbia	3	717	154
Georgia	2	397	91
Illinois	5	1,912	679
Indiana	1	458	98
Iowa	1	286	80
Kansas	1	289	71
Kentucky	1	345	89
Louisiana	2	821	196
Maryland	2	651	164
Massachusetts	3	1,107	299
Michigan	2	708	175
Minnesota	1	451	132
Mississippi	1	46	...
Missouri	3	855	196
Nebraska	2	540	141
New Hampshire	1	41	...
New York	9	2,646	617
North Carolina	3	406	65
North Dakota	1	47	...
Ohio	3	884	282
Oklahoma	1	235	54
Oregon	1	248	62
Pennsylvania	6	2,379	565
South Carolina	1	173	45
South Dakota	1	45	...
Tennessee	3	883	212
Texas	2	688	149
Utah	1	63	...
Vermont	1	124	31
Virginia	2	545	128
West Virginia	1	45	...
Wisconsin	2	570	120
Totals	77	21,379	5,275

* Excluding fifth or intern year students.

REQUIRED INTERNSHIPS

In tables 14 and 15 are listed the medical schools and state licensing boards now requiring internships for the M.D. degree and state licensure respectively.

Eleven schools in the United States and three in Canada require an internship for graduation. Several medical schools will accept research or other clinical work in lieu of hospital service. The University of Minnesota Medical School in 1915 was the first school to adopt the internship as a basis for the M.D. degree. The two medical schools of the University of Chicago, i. e. Rush Medical College and The School of Medicine, discontinued this formal requirement in 1936, and Louisiana State University School of Medicine in 1940. During 1941 this requirement was dropped by the University of Cincinnati School of Medicine, affecting the senior class of 1941. At the University of Illinois College of Medicine the internship requisite was waived for the senior class of 1941 because of the national emergency. The two schools last named awarded 151 and 302 M.D. degrees, respectively, to the group who interned during the last academic session and to those who completed only the four year medical course during this period. The fifth year was also discontinued by McGill University Faculty of Medicine as a result of the reorganization of its medical curriculum affecting the freshman class of 1936-1937. The M.D. degree is conferred by this school on completion of four sessions of thirty-six teaching weeks, but the holders of these degrees are not eligible for the licensing examination in Quebec until the completion of a hospital internship. The M.D. degree is likewise conferred by Duke University School of Medicine after completion of the senior year, but all graduates are required to spend at least two years in a hospital or laboratory work after graduation. This school will now accept one year of military service in lieu of the second year of internship. While this requisite has been dropped by four schools in the United States and one in Canada since 1936, a similar requirement has not been added to the qualifications for an M.D. degree by any school.

The medical licensing boards of twenty-one states, the District of Columbia, Alaska, Hawaii and Puerto Rico require that all applicants for licensure serve a hospital internship. The first state exacting this requirement was Pennsylvania in 1914. Some states require the internship of graduates of medical faculties abroad and of applicants for reciprocity or endorsement.

Some of the medical schools and licensing boards have their own list of hospitals acceptable for intern training, but the list of hospitals approved for intern training by the Council on Medical Education and Hospitals is generally in use. A revised edition of the Council's list will be found beginning on page 757.

There were 1,058 students in the United States and 156 in Canada, a total of 1,214, reported as completing the fifth or intern year requirement of the medical schools which exact the fulfilment of the internship as

TABLE 14.—*Internship Required by Medical Schools*

University of California Medical School
College of Medical Evangelists
University of Southern California School of Medicine
Stanford University School of Medicine
Loyola University School of Medicine
Northwestern University Medical School
University of Illinois College of Medicine *
Wayne University College of Medicine
University of Minnesota Medical School
Duke University School of Medicine **
Marquette University School of Medicine
University of Manitoba Faculty of Medicine
Dalhousie University Faculty of Medicine
University of Montreal Faculty of Medicine

* Internship discontinued for class of 1941 because of the national emergency.
** Two year internship required.

TABLE 15.—*Internship Required by Medical Licensing Boards of All Candidates*

Alabama	Michigan	Rhode Island
Alaska	New Hampshire	South Dakota
Delaware	New Jersey	Utah
District of Columbia	North Dakota	Vermont
Hawaii	Oklahoma	Washington
Idaho	Oregon	West Virginia
Illinois	Pennsylvania	Wisconsin
Iowa	Puerto Rico	Wyoming
Louisiana		

Some states require the internship of graduates of medical faculties abroad and reciprocity or endorsement applicants.

There were 1,058 students in the United States and 156 in Canada, a total of 1,214, reported as completing the fifth or intern year requirement of the medical schools which exact the fulfilment of the internship as

a requisite for the M.D. degree. Statistics computed indicate that 98 per cent of the graduates of recent years have obtained or are obtaining this added experience.

DISTRIBUTION BY SEX

Students and graduates in the United States distributed by sex are given in table 16. Seventy-six schools had both men and women students, of which sixty-six had women graduates. Of this total, nine Canadian faculties had students of both sexes and four had both men and women graduates. Women were enrolled in six of the ten schools in the United States offering courses of the basic medical sciences and also in the one such school located in Canada.

TABLE 16.—*Distribution by Sex*

	Students		Graduates	
	Men	Women	Men	Women
University of Alabama	98	3	..	..
University of Arkansas	276	10	67	3
University of California	210	29	47	5
College of Medical Evangelists	284	14	81	10
University of Southern California	199	2	48	1
Stanford University	227	13	56	5
University of Colorado	192	12	44	1
Yale University	190	16	48	3
Georgetown University	306	..	73	..
George Washington University	240	20	57	2
Howard University	134	17	18	4
Emory University	218	..	54	..
University of Georgia	173	6	37	..
Loyola University	259	11	104	3
Northwestern University	537	19	131	3
Rush Medical College	201	11	89	5
University of Chicago, The School of Medicine	242	16	38	4
University of Illinois	578	38	279	23
Indiana University	436	22	95	3
State University of Iowa	272	14	75	5
University of Kansas	276	13	69	2
University of Louisville	335	10	86	3
Louisiana State University	327	11	73	2
Tulane University of Louisiana	463	20	117	4
Johns Hopkins University	255	27	66	6
University of Maryland	347	22	83	9
Boston University	169	24	38	5
Harvard Medical School	528	..	137	..
Tufts College	367	19	86	4
University of Michigan	427	33	106	11
Wayne University	235	13	54	4
University of Minnesota	416	35	125	7
University of Mississippi	44	2	..	..
University of Missouri	81	2	..	..
St. Louis University	421	..	99	..
Washington University	326	25	80	8
Creighton University	212	11	61	3
University of Nebraska	307	10	76	1
Dartmouth Medical School	41	..	..	..
Albany Medical College	130	10	28	1
Long Island College of Medicine	340	25	76	5
University of Buffalo	246	20	61	5
Columbia University	386	25	100	4
Cornell University	274	20	57	6
New York Medical College	284	21	64	3
New York University	461	38	114	8
University of Rochester	190	12	40	3
Syracuse University	151	13	37	5
University of North Carolina	75	3	..	..
Duke University	255	7	63	2
Wake Forest College	63	3	..	..
University of North Dakota	47	..	..	..
University of Cincinnati	292	14	143	8
Western Reserve University	273	9	62	1
Ohio State University	279	16	65	3
University of Oklahoma	224	11	51	3
University of Oregon	242	6	60	2
Hahnemann Medical College	544	..	130	..
Jefferson Medical College	508	..	120	..
Temple University	397	38	103	9
University of Pennsylvania	463	23	121	4
Woman's Medical College	..	115	..	23
University of Pittsburgh	282	9	54	1
Medical College of South Carolina	167	6	42	3
University of South Dakota	45	..	..	..
University of Tennessee	446	15	106	4
Meharry Medical College	208	8	46	2
Vanderbilt University	200	6	53	1
Baylor University	283	13	61	3
University of Texas	359	23	82	3
University of Utah	59	4	..	..
University of Vermont	119	5	30	1
University of Virginia	240	10	52	2
Medical College of Virginia	267	28	65	9
West Virginia University	44	1	..	..
University of Wisconsin	234	24	42	6
Marquette University	297	15	71	1
University of Alberta	186	15	34	3
University of Manitoba	198	19	57	5
Dalhousie University	173	4	41	..
Queen's University	266	..	42	..
University of Western Ontario	204	18	29	1
University of Toronto	688	59	128	10
McGill University	356	29	81	8
University of Montreal	195	8	53	1
Laval University	310	5	67	2
University of Saskatchewan	44	5	..	..
Totals	22,853	1,308	5,527	310

Male students numbered 22,853 and included 5,527 graduates; the number of female students 1,308 and graduates 310. In the United States there were 20,233 male students and 4,995 graduates, and in Canada 2,620 students and 532 graduates. Likewise there were 1,146 women students and 280 graduates in the United States and 162 women students and 30 graduates in Canada.

There were 2,924 students and 655 graduates enrolled in schools which are not coeducational. Included in these figures are 266 students and 42 graduates of one school in Canada.

In the one medical school for women, 115 students were enrolled and 23 graduates.

An average of 16 women students were enrolled in the sixty-eight coeducational institutions, and an average of 3 graduated from each of fifty-nine schools. The greatest number of women enrolled in coeducational institutions in the United States was 38 each studying at the University of Illinois, New York University and Temple University, while in Canada the University of Toronto enrolled 59.

TABLE 17.—*Distribution by Sex in the United States and Canada, 1936-1940*

	Students		Graduates	
Year	Male	Female	Male	Female
1935-1936	24,219	1,254	5,388	268
1936-1937	23,787	1,244	5,624	261
1937-1938	23,234	1,307	5,439	252
1938-1939	22,919	1,293	5,290	285
1939-1940	22,903	1,291	5,430	273
1940-1941	22,853	1,308	5,527	310

Figures are given in table 17 showing this distribution for a six year period. While the total number of male students has been slightly decreasing, the figures show a slight increase in women medical students.

WOMEN IN MEDICINE

The first woman to receive the degree of Doctor of Medicine in the United States was Elizabeth Blackwell. She studied in and graduated from the Geneva Medical College at Syracuse, N. Y., in 1849. The first medical school for women, the Woman's Medical College of Pennsylvania, was organized in 1850 with a class of seven. It is still functioning and is said to be the only medical school exclusively for women.

During the past year, as shown in table 18, there were 1,146 women studying medicine, constituting 5.4 per cent of the total student enrolment. Twenty-seven more women were graduated than in 1940. They numbered 280, or 5.3 per cent. Of the women matriculants, 115 were in attendance at the one medical school for women while 1,031 were matriculated in sixty-eight other schools. Twenty-three were graduates of the Woman's Medical College of Pennsylvania, while 257 secured their degrees from coeducational schools. In the seventeen years since 1925, 3,801 have received degrees in medicine. Statistics compiled from the American Medical Directory revealed that in 1940 there were 7,470 women physicians in the United States listed.

Women are admitted to all medical schools of the United States except Georgetown University School of Medicine, Emory University School of Medicine, Harvard Medical School, St. Louis University School of Medicine, Dartmouth Medical School and Jefferson Medical College.

The two schools which have been coeducatonal since their organization had no women students, namely the Universities of North and South Dakota.

The Hahnemann Medical College of Pennsylvania, which has never admitted women as students, will accept them for the next session.

PART TIME, SPECIAL AND OTHER STUDENTS ENROLLED IN MEDICAL SCHOOLS

In forty-two medical schools in the United States and five in Canada, during the session 1940-1941, there were 1,598 part time, special and other students pursuing medical subjects, which are summarized in table 19. This group comprises 132 part time, 299 special and 1,167 others.

The students studying part time were enrolled in twenty-one schools in the United States and two in Canada. The largest group enrolled in any one school were 38 studying at the University of Kansas School of Medicine. Fourteen were registered at the University of Buffalo and 10 at the University of Pittsburgh. Less than 5 were enrolled in thirteen schools.

The 299 special students matriculated in twenty-eight schools in the United States and three in Canada. The greatest number (107) were at Northwestern University Medical School. At The School of Medicine of the University of Chicago 40 were in attendance, at the University of Texas 21, Columbia University and the University of Toronto each had 18 special students, while the University of Tennessee admitted 17. All other schools registered fewer than 10.

There were also 1,167 students not candidates for the medical degree pursuing medical subjects in eighteen medical schools of the United States and four in Canada. For the most part these students are enrolled in the graduate school. At New York University there were 245 such students and at the University of Illinois 225. Northwestern registered 138, the University of California 132 and Vanderbilt University 97, while other schools matriculated fewer than 55.

The University of Southern California, the University of Michigan, New York University and the University of Toronto matriculated all three of these types of students.

TABLE 18.—*Women in Medicine in the United States*

Year	Women Students	Percentage of All Students	Women Graduates	Percentage of All Graduates
1905	1,073	4.1	219	4.0
1910	907	4.0	116	2.6
1915	592	4.0	92	2.6
1920	818	5.8	122	4.0
1925	910	5.0	204	5.1
1926	935	5.0	212	5.4
1927	964	4.9	189	4.7
1928	929	4.5	207	4.9
1929	925	4.4	214	4.8
1930	955	4.4	204	4.5
1931	990	4.5	217	4.6
1932	955	4.3	208	4.2
1933	1,056	4.7	214	4.4
1934	1,020	4.5	211	4.2
1935	1,077	4.7	207	4.1
1936	1,133	5.0	246	4.7
1937	1,113	5.1	238	4.4
1938	1,161	5.4	237	4.6
1939	1,144	5.4	260	5.1
1940	1,145	5.4	253	5.0
1941	1,146	5.4	280	5.3

SCHOOLS, STUDENTS AND GRADUATES, 1905-1941

The number of medical schools, students and graduates in the United States for five year intervals from 1905 to 1920 and for each year since is shown in table 20. In 1905 in the one hundred and sixty schools then existing there were 26,147 students. The total number of undergraduate medical students for the college session 1940-1941 was 21,379, an increase of 108 over 1930-1940. This tabulation covers only candidates for the M.D. degree and does not include part time and special students, though their work may later be accepted as fulfilling part of the requirement for the M.D. degree.

In the ten years 1910 to 1920 there was a decrease in enrolment of more than 7,000, while from 1921 to 1935 there was a continuous increase. For four years the trend was slightly downward, and then in 1940 there was again an increase. This year it may be expected to increase still further, since some schools have announced a 10 per cent increase in the size of freshman classes because of the national emergency. Some schools also are planning slight increases in the enrolment of their advanced classes.

The number of graduates in 1941 was 5,275, an increase of 178 over 1940. The discontinuance of the internship requirement by two schools is responsible for the increase. The additional graduates numbered 214. There were, however, fewer graduates in 1941 from sixty-seven schools granting the M.D. degree than from 160 schools in 1905. With the exception of 1933, 1938 and 1939 there has been an increase in the number of medical graduates each year since 1925.

TABLE 19.—*Part Time, Special and Other Students Enrolled in Medical Schools, 1940-1941*

	Part Time	Special	Others Enrolled
University of Arkansas	6	8	..
University of California	..	..	132
University of Southern California	1	2	20
Georgetown University	..	1	..
Emory University	1	..	..
Loyola University	2	1	..
Northwestern University	..	107	138
Rush Medical College	..	1	..
Univ. of Chicago, The School of Medicine	..	40	..
University of Illinois	..	3	225
Indiana University	..	7	..
State University of Iowa	2	..	17
University of Kansas	38	9	..
Louisiana State University	..	3	..
Tulane University	4	..	..
Johns Hopkins University	6	10	..
Boston University	..	1	7
Tufts College	..	1	..
University of Michigan	6	6	2
Wayne University	6	..	33
University of Minnesota	..	1	..
University of Mississippi	5	..	..
Washington University	3	..	35
University of Nebraska	..	..	3
Albany Medical College	..	1	..
Columbia University	..	18	46
New York Medical College	..	..	13
New York University	6	2	245
University of Buffalo	14	2	..
University of North Carolina	3	..	..
University of Cincinnati	..	1	..
University of Oklahoma	..	3	6
University of Oregon	..	5	21
University of Pittsburgh	10	..	..
Woman's Medical College	1	1	..
University of South Dakota	3	..	..
Meharry Medical College	..	1	..
University of Tennessee	..	17	9
Vanderbilt University	..	..	97
University of Texas	2	21	..
University of Utah	1	2	..
Marquette University	3	..	..
McGill University	1	..	10
University of Manitoba	..	3	1
University of Montreal	..	..	54
University of Toronto	8	18	53
University of Western Ontario	..	3	..
Totals	132	299	1,167

The decrease in student enrolment in 1936 and in the number of graduates in 1940 was in part the result of the survey of medical schools conducted by the Council on Medical Education and Hospitals during 1934-1936 and its recommendation to several medical schools that their enrolment be decreased in order to provide more adequate opportunities for the student body. There would have been a decrease in the graduating class of 1941 had not two schools discontinued their intern year.

Not shown in the table this year are figures for the year when the lowest number of M.D. degrees were granted. In that year (1922) there were only 2,520 graduates because of the small size of the class that entered as freshmen in 1918 during the World War.

TABLE 20.—*Schools, Students and Graduates in the United States, 1905-1941*

	Schools	Students*	Graduates
1905	160	26,147	5,606
1910	131	21,526	4,440
1915	96	14,891	3,536
1920	85	13,798	3,047
1921	83	14,466	3,186
1922	81	15,635	2,520
1923	80	16,160	3,120
1924	79	17,728	3,562
1925	80	18,300	3,974
1926	79	18,840	3,962
1927	80	19,662	4,035
1928	80	20,545	4,262
1929	76	20,878	4,446
1930	76	21,597	4,565
1931	76	21,982	4,735
1932	76	22,135	4,936
1933	77	22,466	4,895
1934	77	22,799	5,035
1935	77	22,888	5,101
1936	77	22,564	5,183
1937	77	22,095	5,377
1938	77	21,587	5,194
1939	77	21,392	5,089
1940	77	21,271	5,097
1941	77	21,379	5,275

* Includes figures for schools of the basic medical sciences.

The number of medical schools in 1905 was one hundred and sixty; by 1910 the number dropped to one hundred and thirty-one and since 1915 there have been fewer than one hundred. Since 1933 there have been in the United States sixty-six approved four year schools, one offering only clinical courses, and ten schools of the basic medical sciences.

In the seventy-seven medical schools in the United States, including the schools of the basic medical sciences, there were 21,379 students and 5,275 graduates.

GRADUATES WITH BACCALAUREATE DEGREES

Table 21 records the number of graduates of medical schools in 1941 who held baccalaureate degrees. It will be noted that 3,647 of the 5,837 graduates held such degrees, while only five schools require a degree for admission. All the graduates of Stanford, Chicago, Wayne, Albany, Cornell, Western Reserve, Oregon, Jefferson and Vanderbilt—nine schools—held baccalaureate degrees. One of these schools has a degree requisite for admission, three will enroll students with three years of college training if the baccalaureate degree is conferred at the end of the first year in medicine, while four schools have a three year requirement. Four schools in the United States which have a degree requirement accepted altogether 9 students with less than the stated college education. None of the graduates of the University of Arkansas, the Medical College of South Carolina or Dalhousie University were in possession of a college degree. The school in the United States having the fewest graduates with college degrees was Columbia University. Only 4 of the 104 graduates had baccalaureate degrees. Of the 138 graduates of the University of Toronto, 29 were reported as having an arts degree. A percentage of 62.4 of all graduates held degrees.

TABLE 21.—*Graduates with Baccalaureate Degrees*

	Graduates	Degrees
University of Arkansas	70	..
University of California	52	51
College of Medical Evangelists	91	33
University of Southern California	49	38
Stanford University	61	61
University of Colorado	45	36
Yale University	51	49
Georgetown University	73	58
George Washington University	50	46
Howard University	22	9
Emory University	54	36
University of Georgia	37	19
Loyola University	107	25
Northwestern University	134	73
Rush Medical College	94	39
University of Chicago, The School of Medicine	42	42
University of Illinois	302	23
Indiana University	98	55
State University of Iowa	80	25
University of Kansas	71	42
University of Louisville	89	55
Louisiana State University	75	41
Tulane University of Louisiana	121	81
Johns Hopkins University	72	70
University of Maryland	92	75
Boston University	33	32
Harvard Medical School	137	126
Tufts College	90	87
University of Michigan	117	87
Wayne University	58	58
University of Minnesota	132	32
St. Louis University	99	63
Washington University	97	83
Creighton University	64	31
University of Nebraska	77	36
Albany Medical College	29	29
Long Island College of Medicine	81	72
University of Buffalo	66	34
Columbia University	104	4
Cornell University	63	63
New York Medical College	67	65
New York University	122	120
University of Rochester	43	39
Syracuse University	42	36
Duke University	65	48
University of Cincinnati	151	49
Western Reserve University	63	63
Ohio State University	68	61
University of Oklahoma	54	23
University of Oregon	62	62
Hahnemann Medical College	130	102
Jefferson Medical College	120	120
Temple University	112	91
University of Pennsylvania	125	117
Woman's Medical College	23	15
University of Pittsburgh	55	46
Medical College of South Carolina	45	..
University of Tennessee	110	61
Meharry Medical College	48	44
Vanderbilt University	54	54
Baylor University	64	28
University of Texas	85	62
University of Vermont	31	29
University of Virginia	54	36
Medical College of Virginia	74	61
University of Wisconsin	48	36
Marquette University	72	27
University of Alberta	37	10
University of Manitoba	62	23
Dalhousie University	41	..
Queen's University	42	5
University of Western Ontario	39	9
University of Toronto	138	29
McGill University	89	70
University of Montreal	54	36
Laval University	69	51
Totals	5,837	3,647

GRADUATES WITH B.S. IN MEDICINE DEGREE

The graduates of twenty-six medical schools in the United States and two in Canada received the Bachelor of Science in Medicine degree. There were 577 awarded in the United States and 2 in Canada. The largest single

group to receive this degree were 103 graduates of the medical school of the University of Minnesota, while the University of Illinois issued 95 degrees. Other schools granted fewer than 50. In 1940 the graduates of thirty schools in the United States and two in Canada awarded 738 such degrees, whereas in 1941 twenty-six schools in the United States and two in Canada granted 577 degrees. Fifty-eight graduates of Canada obtained the degree in 1940 and only 2 in 1941. Schools in general are discontinuing the practice of issuing such degrees, while others have never done so.

TABLE 22.—*Students in the United States by Years, 1930-1940*

	Preclinical		Clinical		Intern Year	Total
1930-1931	6,456	5,538	5,080	4,908	1,025	23,007
1931-1932	6,360	5,462	4,932	4,885	1,067	23,202
1932-1933	6,426	5,479	5,017	4,948	1,106	23,572
1933-1934	6,457	5,571	4,988	4,967	1,183	23,982
1934-1935	6,356	5,624	5,142	4,905	1,233	24,121
1935-1936	6,005	5,458	5,230	5,020	1,213	23,777
1936-1937	5,910	5,269	5,140	5,158	1,255	23,350
1937-1938	5,791	5,255	4,986	5,036	1,132	22,719
1938-1939	5,754	5,160	4,947	4,921	1,152	22,454
1939-1940	5,794	5,177	4,921	4,894	1,152	22,423
1940-1941	5,837*	5,254*	4,969*	4,849*	1,058	22,437

* Excluding enrolment figures for the two medical schools of the University of Chicago, i. e., Rush Medical College 212 and The School of Medicine 258, a total of 470.

STUDENTS BY CLASSES, 1930-1940

The number of students enrolled in preclinical and clinical classes in the medical schools of the United States for each session from 1930 to 1940 is presented in table 22. For the session 1940-1941 the attendance for the first preclinical year was 5,837. In the second preclinical year 5,254 were registered. In the clinical years 4,969 and 4,849 respectively were enrolled. The two medical schools of the University of Chicago are not operated under the promotion by class system and therefore the figures for enrolment at these schools are included only in the total column. At Rush Medical College and The School of Medicine of the University of Chicago there were 470 students enrolled during the session just closed, 212 and 258 respectively.

By comparison, it will be noted that the freshman class was increased by 243, the sophomore enrolment 77 and the junior class 48, while the senior registration was 45 fewer. The number interning as a requirement for the degree decreased 94. There was an increase in the total enrolment of all classes including the intern year of 14.

STUDENTS LEAVING SCHOOL DURING FIRST TWO YEARS

Of the 5,910 students selected for the freshman class of 1936-1937, 685 failed or withdrew during the first year and 278 more had dropped out by the end of the second medical year. A comparison of these figures with those for 1938-1939 is made in table 23.

While 156 fewer freshmen were enrolled in 1938-1939 than in 1936-1937, there were also 178 fewer students who had discontinued their course by the end of the second year. A decrease in the size of the entering class has not meant a corresponding reduction of the number of students in the clinical years. Further, the failure of 13 per cent of the students to continue beyond the second year suggests that many of those who were admitted lacked the ability to meet the exacting requirements of the medical curriculum.

FEES

The eighty-seven medical schools of the United States and Canada, including those offering courses in the basic medical sciences, have been grouped according to the tuition fees charged for the session 1940-1941 in table 24. An average was computed of the resident fees for each school. Three schools had fees under $99. These were the Universities of North Dakota, Oklahoma and Texas. Twenty-two schools had fees of $500 or more, namely the College of Medical Evangelists, Yale, George Washington, Georgetown, Loyola, Tulane, Johns Hopkins, Maryland, Tufts, St. Louis, Washington, Columbia, Cornell, Long Island, New York Medical, New York University, Syracuse, Buffalo, Cincinnati, Hahnemann, Pennsylvania and Pittsburgh. Thirty-three schools in the United States and five in Canada made an additional charge for nonresidents, ranging from $50 each year by the Universities of Mississippi, Nebraska, Cincinnati and Virginia to $400 exacted by Louisiana State University School of Medicine. Medical school fees have been increased, as can be noted by a comparison with earlier figures. In 1940 there were two schools in the first group, seven in the second, twenty-three in the third, fourteen in the fourth, twenty-five in the fifth and sixteen in the sixth group.

The lowest additional fee for nonresidents in the United States was $50, and in Canada one school has a nonresident fee of $5 for the first and $10 for the second, third and fourth year. Fifteen schools have a nonresident fee of $100 or less, eleven have fees between $101 and $200, nine from $201 to $300 and two from $301 to $400, while one school has a reciprocal fee for nonresidents.

TABLE 23.—*Students Leaving School During First Two Years*

	Class Entering 1936	Class Entering 1938
Freshman enrolment	5,910	5,754
Junior enrolment	4,947	4,969
Loss during first two years	963	785
	−785	
	178 fewer students lost during first two years by the class entering in 1938.	

TABLE 24.—*Fees, 1940-1941*

	Schools
Under $99	3
$100 to 199	8
200 to 299	20
300 to 399	15
400 to 499	19
500 or over	22
Total	87

Based on fees charged resident students.

The average resident fee charged in medical schools in the United States for the last session was $386, whereas in 1940 it was $378, in 1939 $353 and in 1938 $342.

CITIZENS OF THE UNITED STATES IN FACULTIES OF MEDICINE ABROAD

Beginning in 1931, citizens of the United States began to migrate to Europe to pursue medical courses. At one time reports indicated that there were approxi-

mately 1,500 such students. By 1939 there were at least 500, studying principally in the extramural schools of Scotland. Completion of the professional education of these students was interrupted by cancellation of passports to combat areas. Some students in the upper classes were permitted to return to complete their training and others went to Switzerland, where at that time visas were still obtainable. It is now impossible for students from this country to secure a medical education in any European country. This problem was considered by the Council on Medical Education and Hospitals at a meeting held in December 1939, and it was of the opinion that the granting of advanced standing on the basis of foreign credentials should be left to the discretion of each medical school. The records indicate that relatively few students have been accepted on this basis by the approved medical schools in this country.

The Council on Medical Education and Hospitals does not grade or classify medical schools outside the United States and Canada. No opportunity is afforded for visiting and inspecting such schools, nor are official reports received from them. The Council therefore has no evidence on which to base a rating. A list of foreign schools which has been published from time to time merely serves as a key to the American Medical Directory and indicates the names of the institutions which physicians now licensed to practice in the United States attended or from which they graduated. In the next edition, because of the inability to verify claims of foreign degrees, it is planned to indicate by the symbol ° that the information given is that furnished by the licensing board and that independent verification by the American Medical Association is lacking. It may be assumed that foreign degrees without this symbol have been officially verified.

DESCRIPTION OF MEDICAL SCHOOLS

ARKANSAS

Little Rock

UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE, 1209 McAlmont Street.—Organized in 1879 as the Medical Department of Arkansas Industrial University. Present title in 1899. In 1911 the College of Physicians and Surgeons united with it and it became an integral part of the University of Arkansas. The first class was graduated in 1880. Clinical teaching was suspended in 1918 but resumed in 1923. Coeducational since organization. The faculty consists of 29 professors and 128 lecturers and instructors, a total of 157. The curriculum covers four years of nine months each. Entrance requirements are two years of collegiate work. The B.S. Degree in Medicine is conferred at the end of the second year. The fees for the four years for residents of Arkansas are $280 per year; nonresidents are charged $225 additional each year. The registration for 1940-1941 was 286; graduates 70. The next session begins Oct. 1, 1941, and ends June 9, 1942. The Dean is Byron L. Robinson, M.D.

CALIFORNIA

Berkeley-San Francisco

UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL, University Campus, Berkeley; Medical Center, San Francisco.—Organized in 1864 as the Toland Medical College. The first class graduated in 1864. In 1873 it became the Medical Department of the University of California. In 1909, by legislative enactment, the College of Medicine of the University of Southern California, at Los Angeles, became a clinical department but was changed to a graduate school in 1914. In 1915 the Hahnemann Medical College of the Pacific was merged, and elective chairs in homeopathic materia medica, and therapeutics were provided. Coeducational since organization. Three years of collegiate work are required for admission. The work of the first year is given at Berkeley and that of the last three years at San Francisco. The faculty is composed of 162 professors and 306 associates and assistants, a total of 468. The course covers four years of eight months each, and an additional fifth year consisting of an internship in a hospital or of special work in a department of the medical school. Fees for the four years, respectively, for residents of California are $330, $301, $296 and $296; nonresidents are charged $300 additional each year. The registration for 1940-1941 was 239; graduates, 52. The next session begins Aug. 25, 1941, and ends May 23, 1942. The Acting Dean is President Robert G. Sproul, LL.D., Berkeley.

Loma Linda-Los Angeles

COLLEGE OF MEDICAL EVANGELISTS, Loma Linda; Boyle and Michigan Avenues, Los Angeles. Organized in 1909. The first class graduated in 1914. The laboratory departments are at Loma Linda, the clinical departments at Los Angeles. Coeducational since organization. The faculty is composed of 47 professors and 325 associates, assistants and instructors, a total of 372. The course covers a period of four years of nine months each and an additional year consisting of an internship in an approved hospital. Three years of collegiate work are required for admission. The total fees are respectively, $612, $601, $612 and $612. The registration for 1940-1941 was 298; graduates, 91. The next session begins Sept. 1, 1941, and ends May 31, 1942. Because of the existing emergency a special session for one-fourth of the senior class has been arranged and began June 1 and ends Feb. 28. The President is Percy T. Magan, M.D., Los Angeles. The Dean is E. H. Risley, M.D., Loma Linda; the Associate Dean is W. E. Macpherson, M.D., Los Angeles.

Los Angeles

UNIVERSITY OF SOUTHERN CALIFORNIA SCHOOL OF MEDICINE, 3551 University Avenue.—Organized in 1885 as the University of Southern California College of Medicine. First class graduated in 1888. In 1908, it became the Los Angeles Medical Department of the University of California. In 1909 the College of Physicians and Surgeons, established in 1904, became the Medical Department of the University of Southern California. Its activities were suspended in 1920; reorganized in May 1928, under present title. The faculty consists of 155 professors and 198 instructors, assistants and others, a total of 353. An internship is required for graduation. Three years of collegiate work are required for admission. Coeducational since organization. Annual fees amount to $452. The registration for 1940-1941 was 201, graduates, 49. The next session begins Sept. 22, 1941, and ends June 6, 1942. The Dean is Paul S. McKibben, Ph.D.

Stanford University-San Francisco

STANFORD UNIVERSITY SCHOOL OF MEDICINE, University Campus, Stanford University; 2398 Sacramento Street, San Francisco. The main buildings are in San Francisco. The laboratories of anatomy, bacteriology and experimental pathology, chemistry, and physiology are located on the campus at Stanford University, which is thirty miles southeast of San Francisco adjoining the City of Palo Alto. The post office is Stanford University. Organized in 1908, when by agreement the interests of Cooper Medical College were taken over. The first class graduated in 1913. Coeducational since organization. The faculty consists of 132 professors and 144 lecturers, assistants and others, a total of 276. Three years of collegiate work are required for admission. Beginning with session 1941-1942 the four quarter plan, it is expected, will be placed in operation for all classes, admitting one class each year. An internship is a requirement for graduation. The fees for the four years, respectively, are $530, $458, $409 and $409. The registration for 1940-1941 was 240; graduates, 61. During 1941-1942 the quarters begin September 23, January 5, March 31 and June 18 and ends December 16, March 20, June 10 and August 29. The Dean is Loren Roscoe Chandler, M.D.

COLORADO

Denver

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE, 4200 East Ninth Avenue.—Organized in 1883. Classes were graduated in 1885 and in all subsequent years except 1898 and 1899. Denver and Gross College of Medicine was merged, Jan. 1, 1911. Coeducational since organization. The faculty is composed of 57 professors and 130 lecturers, instructors and assistants, a total of 187. The course covers four years of nine months each. The entrance requirements are three years of collegiate work. The fees for residents of Colorado are, respectively, $301, $296, $281 and $281. Nonresidents are charged $245 additional each year. The registration for 1940-1941 was 204; graduates, 45. The next session begins Sept. 24, 1941, and ends June 8, 1942. Advanced students admitted January 5 and March 23, 1942. The Dean is Maurice H. Rees, M.D.

CONNECTICUT

New Haven

YALE UNIVERSITY SCHOOL OF MEDICINE, 333 Cedar Street.—Chartered in 1810 as the Medical Institution of Yale College. Organized in 1812; instruction began in 1813; first class graduated in 1814. A new charter in 1879 changed the name to the Medical Department of Yale College. In 1884, the Connecticut Medical Society surrendered such authority as had been granted by the first charter. In 1887, Yale College became Yale University. Coeducational since 1916. The faculty consists of 176 professors and 233 lecturers and assistants, a total of 409. The requirements for admission are three years of collegiate work. The

course covers four years of nine months each. The fees are, respectively, $505, $500, $500, and $520. The registration for 1940-1941 was 206, graduates, 51. The next session begins Sept. 22, 1941, and ends June 10, 1942. The Dean is Francis G. Blake, M.D.

DISTRICT OF COLUMBIA

Washington

GEORGETOWN UNIVERSITY SCHOOL OF MEDICINE, 3900 Reservoir Road, N.W.—Organized in 1851. First class graduated in 1852. The faculty is composed of 63 professors, 45 associate professors, 12 assistant professors, 5 adjunct professors, and 152 instructors, a total of 277. A baccalaureate degree is required for admission. The course of study covers four terms of eight and one-half months each. The present fees for each of the four sessions are $500. The registration for 1940-1941 was 306; graduates, 73. The next session begins Sept. 18, 1941, and ends June 8, 1942. The Dean is David V. McCauley, S.J., Ph.D.

GEORGE WASHINGTON UNIVERSITY SCHOOL OF MEDICINE, 1335 H Street, N.W.—Organized in 1825 as the Medical Department of Columbian College. Also authorized to use the name National Medical College. Classes were graduated in 1826 and in all subsequent years except in 1834 to 1838, and 1861 to 1863, inclusive. The original title was changed to Medical Department of Columbian University in 1873. In 1903 it absorbed the National University Medical Department. In 1904, by an Act of Congress, the title of George Washington University was granted to the institution. Coeducational since 1884. The faculty is composed of 74 professors and 137 instructors, demonstrators and assistants, a total of 211. Two years of collegiate work are required for admission. Beginning with the session 1941-1942 the premedical requirement will be raised to three years. The course covers four years of thirty-six weeks each. The fees for each of the four years are $550. The registration for 1940-1941 was 260; graduates, 59. The next session begins Sept. 22, 1941, and ends June 10, 1942. Because of the existing emergency a special session (optional) of the senior class has been arranged and began June 9 and ends February 22. The Dean is Walter A. Bloedorn, M.D.

HOWARD UNIVERSITY COLLEGE OF MEDICINE, Fifth and W Streets, N.W.—Chartered in 1867. Organized in 1869. The first class graduated in 1871. Coeducational since organization. Negro students compose a majority of those in attendance. The faculty comprises 34 professors and 75 instructors and assistants, a total of 109. The admission requirements are at least two years of collegiate work. The course covers four years of thirty-three weeks each. The fees are, respectively, $269, $269, $259 and $266. Registration for 1940-1941 was 151; graduates, 22. The next session begins Sept. 20, 1941, and ends June 5, 1942. The Dean is John Wesley Lawlah, M.D.

GEORGIA

Atlanta

EMORY UNIVERSITY SCHOOL OF MEDICINE, 50 Armstrong Street.—Organized in 1854 as the Atlanta Medical College. Classes graduated 1855 to 1861, when it suspended. Reorganized in 1865. A class graduated in 1865 and each subsequent year except 1874. In 1898 it merged with the Southern Medical College (organized in 1878), taking the name of Atlanta College of Physicians and Surgeons. In 1913 it merged with the Atlanta School of Medicine (organized in 1905), reassuming the name of Atlanta Medical College. Became the Medical Department of Emory University in 1915; assumed present title in 1917. Three years of collegiate work are required for admission. The faculty consists of 14 professors and 176 associates and assistants, a total of 190. The course of study is four years of thirty-two weeks each. The fees for each of the four years are $338. The registration for 1940-1941 was 218, graduates, 54. The next session begins Sept. 25, 1941, and ends June 8, 1942. The Dean is Russell H. Oppenheimer, M.D.

Augusta

UNIVERSITY OF GEORGIA SCHOOL OF MEDICINE, University Place. Organized in 1828 as the Medical Academy of Georgia, the name being changed to the Medical College of Georgia in 1829. After 1873 it was known as the Medical Department of the University of Georgia. On July 1, 1933 the name was changed to the University of Georgia School of Medicine. Property transferred to the University in 1911. Classes were graduated in 1833 and all subsequent years except 1862 and 1863. Coeducation was begun in 1920. The faculty includes 59 professors and 35 assistants, a total of 94. Three years of collegiate work are required for admission. The course is four years of thirty-four weeks each. The fees for each of the four years are $225 for residents of Georgia, and $445 each year for nonresidents. The registration for 1940-1941 was 179, graduates 37. The next session begins Oct. 1, 1941, and ends June 15, 1942. The Dean is G. Lombard Kelly, M.D.

ILLINOIS

Chicago

LOYOLA UNIVERSITY SCHOOL OF MEDICINE, 706 South Wolcott Avenue.—Organized in 1915 by acquisition of Bennett Medical College which had been organized in 1869. Facilities enlarged upon by acquisition of Chicago College of Medicine and Surgery, faculties in basic medical sciences put on full time basis and present title assumed in 1917. Operated as an organic part of Loyola University. Co-educational since organization. Ninety semester hours is the minimum requirement for admission. The course of study is five years, including an internship. The faculty is composed of 32 full time professors and 201 other associate and assistant professors, associates, instructors and assistants, a total of 233. The fees for each year are $510, $515, $492 and $521, respectively. The enrolment for 1940-1941 was 270; graduates, 107. Next session for juniors and seniors begins Sept. 8, 1941, for freshmen and sophomores, Sept. 15, 1941, and ends June 6, 1942. The Dean is Francis J. Braceland, M.D.

NORTHWESTERN UNIVERSITY MEDICAL SCHOOL, 303 East Chicago Avenue.—Organized in 1859 as the Medical Department of Lind University. First class graduated in 1860. In 1864 it became independent as the Chicago Medical College. It united with Northwestern University in 1869 but retained the name of Chicago Medical College until 1891, when the present title was taken. Became an integral part of Northwestern University in 1905. Coeducational since 1926. The faculty comprises 29 professors, 126 associate and assistant professors and 361 associates, instructors and clinical assistants, a total of 516. The requirement for admission is three years of collegiate work. The B.S. degree in medicine may be conferred before the end of the senior year. The school operates on the four quarter plan. A hospital internship is required for graduation. The total fees are $414 each year. The registration for 1940-1941 was 556; graduates, 134. During the academic year 1941-1942 the quarters begin October 1, January 5, March 30 and June 17, and end December 20, March 26, June 6 and August 29. The Dean is J. Roscoe Miller, M.D.

UNIVERSITY OF CHICAGO, THE SCHOOL OF MEDICINE, Fifty-Eighth Street and Ellis Avenue.—Organized in 1924, as a part of the Ogden Graduate School of Science of the University of Chicago. In 1932, when the University of Chicago reorganized its departments, the medical departments were included in the Biological Sciences Division. The work of the first two years in the medical courses has been given on the University Quadrangles since 1899; but the last two years were offered only at Rush Medical College which was affiliated with the university until 1927 when actual work in the clinical departments on the campus began. After that time, candidates for the degree of Doctor of Medicine could take the work of the first two years on the campus and the work of the third and fourth years either on the campus or at the Rush Medical College. Undergraduate courses in the clinical years at Rush Medical College will terminate in June 1942, when the students now enrolled will complete their studies. Thereafter all undergraduate instruction will be given only on the campus of the University. Rush Medical College will be affiliated with the University of Illinois College of Medicine. The faculty of the School of Medicine is composed of 105 professors, 173 associates, instructors and others, a total of 278. The requirements for admission are three years of collegiate work. The B.S. degree in medicine may be obtained during the second year. The curriculum covers twelve quarters of work. Freshmen are admitted in the fall quarter and advanced students in the spring and summer quarters. Sixty-five students are admitted to the first year class in each calendar year. The tuition fee for each of the four years is $450. The registration for 1940-1941 was 258; graduates 42. During the academic year 1941-1942 the quarters begin June 24, October 7, January 5 and March 30, and end August 28, December 19, March 20 and June 17. All correspondence relating to general policies should be addressed to W. H. Taliaferro, Ph.D., Dean of the Division of Biological Sciences, or to A. C. Bachmeyer, M.D., Associate Dean, and that pertaining to student affairs to Victor Johnson, M.D., Dean of Medical Students.

RUSH MEDICAL COLLEGE, 1758 West Harrison Street.—Chartered in 1837 and taught first class in 1843. First class graduated in 1844. In 1887 the College became the medical department of Lake Forest University, retaining, however, its self-government. This relationship was dissolved in April 1898, and in the same month affiliation with the University of Chicago was established. After 1899 the first two years of the medical course were given on the university campus. Clinical years only were offered at Rush Medical College. In May 1924, under a new agreement, the University of Chicago took over the work of Rush Medical College as a department of the university. The faculty is composed of 138 professors, 163 associates, instructors and others, a total of 301. The tuition fee is $450 yearly. The registration for 1940-1941 was 212; graduates, 94. The last session begins Sept. 29, 1941, and ends June 9, 1942. The school is in session all year except the month of September. By resolution of the board of trustees of the University of Chicago, undergraduate courses in the clinical years will terminate in June 1942, when the students now enrolled in these courses will have completed their studies. During 1940-1941 arrangements were entered into by the Trustees of Rush Medical College, the Trustees of the University of Chicago, the Trustees of the University of Illinois and the Board of Managers of the Presbyterian Hospital, whereby the University of Chicago returned to the Trustees of Rush Medical College the property and funds belonging to the College. An affiliation was effected between the Presbyterian Hospital and the University of Illinois. This affiliation provides for the teaching of undergraduate students of the University of Illinois in the wards of the Presbyterian Hospital and in the Central Free Dispensary, which now comes under the direction of the Board of Managers of the Presbyterian Hospital. The staff of the Presbyterian Hospital becomes members of the faculty of the medical school of the University of Illinois. A newly constituted Board of Trustees of Rush Medical College will continue to conserve the funds and property of Rush Medical College. This Rush Board retains the Rush charter and name and ownership of the Rush buildings and equipment and library and certain funds and the power to appoint a faculty as needed. The Rush buildings and equipment and library will be leased to the Presbyterian Hospital for a nominal sum. Under the proposed plan, Rush is at liberty to use its name with any postgradute or graduate project or research for which funds may be provided. The Acting Dean of Rush Medical College is Earle Gray, M.D.

UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE, 1853 West Polk Street.—Organized in 1882 as the College of Physicians and Surgeons. The first class graduated in 1883. It became the Medical Department of the University of Illinois by affiliation in 1897. Relationship with the university was cancelled in June 1912, and was restored in March 1913, when the present title was assumed. Coeducational since 1898. Three years of collegiate work are required for admission. The curriculum covers four years of thirty-two weeks each, and a year of internship in an approved hospital. Senior students enroled during 1940-1941 were not required to comply with the intern requisite because of the national emergency. The B.S. degree in medicine is conferred at the end of the second year. The faculty is composed of 165 professors and 394 associates, instructors and assistants, a total of 559. The total fees for residents of Illinois are $260 a year for students of the first and second years, $310 for the third and fourth; similarly $410 and $460 a year for nonresident students. The registration for 1940-1941 was 616; graduates, 302. The next session begins Sept. 29, 1941, and ends June 12, 1942. The Dean is David J. Davis, M.D.

INDIANA

Bloomington-Indianapolis

INDIANA UNIVERSITY SCHOOL OF MEDICINE, Bloomington; 1040 West Michigan Street, Indianapolis.—Organized in 1903 but did not give all the work of the first two years of the medical course until 1905. In 1907, by union with the State College of Physicians and Surgeons, the complete course in medicine was offered. In 1908 the Indiana Medical College, which was formed in 1905 by the merger of the Medical College of Indiana (organized in 1878), the Central College of Physicians and Surgeons (organized in 1879), and the Fort Wayne College of Medicine (organized in 1879) merged into it. The first class was graduated in 1908. Coeducational since organization. The faculty consists of 270 professors, lecturers, associates and assistants. Three years of collegiate work are required for admission. The B.S. degree in medicine is conferred. The work of the first year is given at Bloomington and the work of the next three years at Indianapolis. The regular fee for the medical course for all four years is $217 a year for residents of Indiana, and $422 for nonresidents. The registration for 1940-1941 was 458; graduates, 98. The next session begins Sept. 15, 1941, and ends June 1, 1942. The Dean is Willis D. Gatch, M.D., Indianapolis.

IOWA

Iowa City

STATE UNIVERSITY OF IOWA COLLEGE OF MEDICINE, University Campus.—Organized in 1869. First session began in 1870. First class graduated in 1871. Absorbed Drake University College of Medicine in 1913. Coeducational since 1870. The faculty is made up of 56 professors, 74 lecturers, demonstrators and assistants, a total of 130. Three years of collegiate work are required for admission. The B.A. degree in the combined course of liberal arts and medicine is conferred. The course of study covers four years of thirty-four weeks each. The tuition fee is $226 each year for residents of Iowa and $490 for nonresidents. The registration for 1940-1941 was 286; graduates, 80. The next session begins Sept. 25, 1941, and ends June 1, 1942. The Dean is Ewen Murchison MacEwen, M.D.

KANSAS

Lawrence-Kansas City

UNIVERSITY OF KANSAS SCHOOL OF MEDICINE, Lawrence; 39th Street and Rainbow Boulevard, Kansas City.—Organized in 1880. It offered only the first two years of the medical course until 1905, when it merged with the Kansas City (Mo.) Medical College, founded in 1869, the College of Physicians and Surgeons, founded in 1894, and the Medico-Chirurgical College, founded in 1897. Absorbed Kansas Medical College in 1913. The first class graduated in 1906. The clinical courses are given at Kansas City. Coeducational since 1880. The faculty includes 74 professors and 147 instructors, assistants and others, a total of 221. The requirement for admission is three years of collegiate work. The B.S. degree in medicine is conferred at the end of the second year. The course covers four years of nine months each. The total fees for residents of the state are, respectively, $159, $170, $165 and $167. For nonresidents the fees are, respectively, $269, $345, $415 and $417. The registration for 1940-1941 was 289; graduates, 71. The next session begins Sept. 17, 1941, and ends June 8, 1942. The Dean is H. R. Wahl, M.D., Kansas City.

KENTUCKY

Louisville

UNIVERSITY OF LOUISVILLE SCHOOL OF MEDICINE, 101 West Chestnut Street.—Organized in 1837 as Louisville Medical Institute. The first class graduated in 1838, and a class graduated each subsequent year except 1863. In 1846 the name was changed to University of Louisville Medical Department. In 1907 it absorbed the Kentucky University Medical Department; in 1908, the Louisville Medical College, the Hospital College of Medicine and the Kentucky School of Medicine. In 1922 it changed its name to the University of Louisville School of Medicine. Coeducational since organization. Two years of collegiate work are the minimum requirement for admission. Preference is given applicants with a degree or three college years leading to a degree. The faculty numbers 77 professors, and 115 assistants, instructors and others, a total of 192. Course covers four years of thirty-two weeks each, exclusive of vacations and examinations. Fees are, respectively, $450, $450, $450 and $460. The registration for 1940-1941 was 345; graduates, 89. The next session begins Sept. 15, 1941, and ends June 2, 1942. The Dean is John Walker Moore, M.D.

LOUISIANA

New Orleans

LOUISIANA STATE UNIVERSITY SCHOOL OF MEDICINE, 1542 Tulane Avenue.—Organized January 1931 as Louisiana State University Medical Center. Present title in 1939. Coeducational. First session October 1931, with students of first and third year. Faculty comprises 28 professors and 156 assistant professors, instructors and assistants, a total of 184. Course covers four years of no less than 32 weeks each. A minimum of three years' collegiate work is required for admission. Total fees, $134 each year for residents of Louisiana; additional tuition of $400 each year for nonresidents. The registration for 1940-1941 was 338; graduates, 75. The next session begins Sept. 8, 1941, and ends May 30, 1942. Because of the existing emergency a special session of the senior class has been arranged and began June 16 and ends February 14. The Dean is B. I. Burns, M.D.

TULANE UNIVERSITY OF LOUISIANA SCHOOL OF MEDICINE, 1430 Tulane Avenue.—Organized in 1834 as the Medical College of Louisiana. Classes were graduated in 1835 and in all subsequent years except 1863-1865, inclusive. It became the Medical Department of the University of Louisiana in 1847, and in turn, the Medical Department of the Tulane University of Louisiana in 1884. Present title in 1913. Coeducational since 1915. The faculty comprises 30 professors and 222 associate and assistant professors, instructors and assistants, a total of 252. The course covers four years of thirty-two weeks each. A minimum of three years of collegiate work is required for admission. Total fees are, respectively, $552, $552, $537 and $547. The registration for 1940-1941 was 483; graduates, 121. The next session begins Sept. 25, 1941, and ends June 10, 1942. Because of the existing emergency, a special session (optional) of the senior class has been arranged and began June 16; students will be permitted to finish two months earlier but will graduate with the regular class. The Dean is Maxwell E. Lapham, M.D.

MARYLAND

Baltimore

JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE, 710 North Washington Street.—The nucleus of a Medical Faculty was constituted in 1883. Systematic postgraduate instruction in pathology and bacteriology was begun in 1886. School was fully organized and opened in 1893. The first class graduated in 1897. Coeducational since organization. The faculty consists of 71 professors and 417 instructors, assistants and others, a total of 488. The requirement for admission is a collegiate degree. The course extends over four years of eight and one-half months each. The total fees are, respectively, $624, $623, $623 and $623. The registration for 1940-1941 was 282; graduates, 72. The next session begins Sept. 23, 1941, and ends June 2, 1942. The Dean is Alan M. Chesney, M.D.

UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE AND COLLEGE OF PHYSICIANS AND SURGEONS, Lombard and Greene Streets.—Organized in 1807 as the College of Medicine of Maryland. The first class graduated in 1810. In 1812 it became the University of Maryland School of Medicine. Baltimore Medical College was merged with it in 1913. In 1915 the College of Physicians and Surgeons of Baltimore was merged and the present name assumed. Coeducational since 1918. The faculty consists of 45 professors and 267 associate and assistant professors and others, a total of 312. Three years of collegiate work are required for admission. The course covers four years of eight months each. The fees are, respectively, $505, $495, $495, $510 for residents of the state; for nonresidents the fees are $150 additional each year. The registration for 1940-1941 was 369; graduates, 92. The next session begins Sept. 25, 1941 and ends June 6, 1942. The Acting Dean is H. Boyd Wylie, M.D.

MASSACHUSETTS

Boston

BOSTON UNIVERSITY SCHOOL OF MEDICINE, 80 East Concord Street.—Organized in 1873 as a homeopathic institution. In 1874 the New England Female Medical College, founded in 1848, was merged into it. The first class was graduated in 1874. Became nonsectarian in 1918. Coeducational since organization. Three years of collegiate work are required for admission. The faculty includes 24 professors, 175 associates and others, a total of 199. The course covers four years. Total fees for each of the four years, respectively, are $479, $475, $475, $490. The registration for 1940-1941 was 193; graduates, 33. The next session begins Sept. 18, 1941, for 1st, 2d and 3d year students, and Sept. 8, 1941, for 4th year students, and ends June 8, 1942. Because of the existing emergency a special session (optional) of the senior class has been arranged and began June 8 and ends March 1. The Dean is Bennett F. Avery, M.D.

HARVARD MEDICAL SCHOOL, 25 Shattuck Street.—Organized in 1782. The first class graduated in 1788. It has a faculty of 168 professors and 470 other instructors and assistants, a total of 638. Two years of collegiate work are required for admission. The total fees for each of the four years are $420, plus $5 the first year for matriculation. The registration for 1940-1941 was 528; graduates, 137. The next session begins Sept. 22, 1941, and ends June 18, 1942. Because of the existing emergency a special session (optional) of the senior class has been arranged and began June 1 and ends March 1. The Dean is C. Sidney Burwell, M.D.

TUFTS COLLEGE MEDICAL SCHOOL, 416 Huntington Avenue.—Organized in 1893 as the Medical Department of Tufts College. The first class graduated in 1894. Coeducational since 1894. It has a faculty of 91 professors and 284 assistants, lecturers and others, a total of 375. A bachelor's degree is required for admission. The course covers four years of eight months each. The total fees for each of the four years

are $512, $507, $507 and $517. The registration for 1940-1941 was 386; graduates, 90. The next session begins Sept. 24, 1941, and ends June 14, 1942. Because of the existing emergency, a special session (optional) of the senior class has been arranged and began June 1. Students will complete their work earlier but will graduate with the regular class in June. The Dean is A. Warren Stearns, M.D.

MICHIGAN

Ann Arbor

UNIVERSITY OF MICHIGAN MEDICAL SCHOOL.—Organized in 1850 as the University of Michigan Department of Medicine and Surgery. The first class graduated in 1851. Present title assumed in 1915. Coeducational since 1870. It has a faculty of 25 professors, 21 associate professors, 25 assistant professors, 126 assistants, instructors and lecturers; a total of 197. The entrance requirements are ninety semester hours. The curriculum covers four years of nine months each. The total fees for Michigan students are $250 for each of the four years, respectively; for nonresidents $400 a year. The registration for 1940-1941 was 460; graduates, 117. The next session begins Sept. 29, 1941, and ends June 20, 1942. The Dean is A. C. Furstenberg, M.D.

Detroit

WAYNE UNIVERSITY COLLEGE OF MEDICINE, 1516 St. Antoine Street. Organized as the Detroit College of Medicine in 1885 by consolidation of Detroit Medical College, organized in 1868, and the Michigan College of Medicine, organized in 1880. Reorganized with the title of Detroit College of Medicine and Surgery in 1913. The first class graduated in 1886. In 1918 it became a municipal institution under the control of the Detroit Board of Education. In 1934 the name was changed by action of the Detroit Board of Education to Wayne University College of Medicine, as a part of the program of consolidation of the Detroit City Colleges into a university system. Coeducational since 1917. Entrance requirement is an academic degree or 90 semester hours of academic credit with "combined degree" guaranteed by school of arts and sciences. The faculty consists of 45 professors, 262 lecturers and others, a total of 307. The course covers four years of nine months each and a fifth year of intern work. The total fees for each of the first four years are, for Wayne County residents $325, and for nonresidents outside of Wayne County $425. The registration for 1940-1941 was 248; graduates, 58. The next session begins September 15, 1941, and ends June City Colleges into a university system. Coeducation since 1917. Entrance 20, 1942. Because of the existing emergency a special session (optional) of the senior class has been arranged and began June 30 and ends February 28. The Dean is Edgar H. Norris, M.D.

MINNESOTA

Minneapolis

UNIVERSITY OF MINNESOTA MEDICAL SCHOOL.—Organized in 1883 as the University of Minnesota College of Medicine and Surgery, reorganized in 1888 by absorption of St. Paul Medical College and Minnesota Hospital College. The first class graduated in 1889. In 1908 the Minneapolis College of Physicians and Surgeons, organized in 1883, was merged. In 1909 the Homeopathic College of Medicine and Surgery was merged. Present title in 1913. Coeducational since organization. The faculty includes 204 professors, of whom 77 are on full time appointment and 127 on part time, and 134 instructors, 29 of whom are on full-time appointment and 105 on part time, a total of 338. The curriculum covers four years of nine months each, and a year's internship in an approved hospital. The school is operated on the four-quarter plan. The entrance requirements are three years of university work, which must include six semester credits of rhetoric, eight semester credits of physics; thirteen credits of general chemistry, qualitative and quantitative analysis, organic and physical chemistry; eight credits of general zoology and genetics and eugenics; four credits of general psychology, and a reading knowledge of scientific German, with a "C" average in all subjects and in the sciences. Students are required to meet the requirements for a degree of B.S. or B.A. before receiving the degree of Bachelor of Medicine (M.B.), which is granted at the end of the four-year course. The M.D. degree is conferred after a year of intern work, of advanced laboratory work, or of public health work has been completed. Students are graduated at the end of any quarter in which work is completed and examinations passed. Total fees are $256 for residents and $412 for nonresidents, each year of three quarters. The registration for 1940-1941 was 451; graduates, 132. During the academic year 1940-1941 the quarters begin September 29, January 5, March 30 and June 17, and end December 18, March 18, June 12 and August 28. The Dean is Harold S. Diehl, M.D.

MISSOURI

St. Louis

ST. LOUIS UNIVERSITY SCHOOL OF MEDICINE, 1402 South Grand Boulevard. Organized in 1901 as the Marion-Sims-Beaumont Medical College by union of Marion-Sims Medical College, organized in 1890, and Beaumont Hospital Medical College, organized in 1886. First class graduated in 1902. It became the Medical School of St. Louis University in 1903. The faculty is composed of 77 professors and 251 instructors and assistants, a total of 328. The completion of three years of college study is the minimum admission requirement but students presenting meritorious credits in excess of the minimum are accepted by preference. The curriculum covers four years of thirty-two weeks each. The summer is optional and offers courses academically equivalent to those in the regular session. The total fees are, respectively, $530, $525, $525 and $565. The registration for 1940-1941 was 421; graduates, 99. The next session begins Sept. 23, 1941, and ends June 1, 1942. The Dean is Alphonse M. Schwitalla, S.J., Ph.D.

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE, Kingshighway and Euclid Avenue.—Organized in 1842 as the Medical Department of St. Louis University. The first class graduated in 1843. In 1855 it was chartered as an independent institution under the name of St. Louis Medical College. In 1891 it became the Medical Department of Washington University. In 1899 it absorbed the Missouri Medical College. Coeducational since 1918. The faculty comprises 131 professors and 265 lecturers, instructors and others, a total of 396. Four years of collegiate work are required for admission. The B.S. degree in medicine is conferred at the end of the third or fourth year. The course is four years of eight months each. The total fees are, respectively, $523, $518, $518 and $523. The registration for 1940-1941 was 351; graduates, 97. The next session begins Sept. 25, 1941, and ends June 9, 1942. The Dean is Philip A. Shaffer, Ph.D.

NEBRASKA

Omaha

CREIGHTON UNIVERSITY SCHOOL OF MEDICINE, 306 North Fourteenth Street.—Organized in 1892 as the John A. Creighton Medical College. The first class graduated in 1893. Present title in 1921. Coeducational since organization. It has a faculty of 75 professors and 76 instructors, lecturers and assistants, a total of 151. Three years of collegiate work required for admission. The B.S. degree in medicine is conferred at the end of the second year. The curriculum covers four years of eight months each. The total fees for the four years are, respectively, $398, $393, $348 and $356, and $100 additional each year for students who have not taken the major part of their work at Creighton University School of Arts and Sciences. The registration for 1940-1941 was 223; graduates, 64. The next session begins Sept. 23, 1941, and ends June 4, 1942. The Dean is Charles M. Wilhelmj, M.D.

UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE, Forty-Second Street and Dewey Avenue.—Organized in 1881 as the Omaha Medical College. The first class graduated in 1882. It became the Medical Department of Omaha University in 1891. In 1902 it affiliated with the University of Nebraska, with the present title. The instruction of the first two years was given at Lincoln and of the last two at Omaha until 1913, when the work of all four years was transferred to Omaha. Coeducational since 1882. The faculty is composed of 78 professors and 54 lecturers and instructors, a total of 132. Three years of collegiate work are required for admission. The B.S. degree in medicine is conferred at the end of the second year. The fees for the four years, respectively, are $219, $214, $214 and $214. The registration for 1940-1941 was 317; graduates, 77. The next session begins Sept. 22, 1941, and ends June 8, 1942. The Dean is C. W. M. Poynter, M.D.

NEW YORK

Albany

ALBANY MEDICAL COLLEGE, 47 New Scotland Avenue.—Organized in 1838. The first class graduated in 1839. It became the Medical Department of Union University in 1873. In 1915 Union University assumed educational control. Coeducational since 1915. The faculty is composed of 86 professors and 109 instructors, assistants and others, a total of 195. A collegiate degree is required for admission, however, students who have completed three years of college work and who have proper specific qualifications will be admitted. This change in the requirements for admission has been instituted for the duration of the present national emergency. The curriculum covers four years of eight months each. The total fees are, respectively, $555, $530, $515 and $525. The registration for 1940-1941 was 140; graduates, 29. The next session begins Sept. 8, 1941, and ends June 8, 1942. The Dean is R. S. Cunningham, M.D.

Brooklyn

LONG ISLAND COLLEGE OF MEDICINE, 350 Henry Street.—Organized in 1858 as the Long Island College Hospital. The first class graduated in 1860 and the last class in 1930. Reorganized with a new charter in 1930 as the present institution. The first class graduated in 1931. Coeducational. It has a faculty of 119 professors, associate, assistant, clinical and assistant clinical professors, and 183 lecturers, associates, instructors, assistants and others, a total of 302. Ninety semester hours of collegiate work are required for admission. The course covers four years. The total fee for each of the four years is $610. The registration for 1940-1941 was 365; graduates, 81. The next session begins Sept. 15, 1941, for the fourth year and Sept. 29, 1941, for the other years, and ends June 9, 1942. The Dean is Jean Alonzo Curran, M.D.

Buffalo

UNIVERSITY OF BUFFALO SCHOOL OF MEDICINE, 24 High Street.—Organized in 1846. The first class graduated in 1847. It absorbed the Medical Department of Niagara University in 1898. Coeducational since organization. The faculty is composed of 94 professors and 189 associates, assistants and others, a total of 283. The minimum requirement for admission is two years of collegiate work including certain prescribed science courses. The course covers four years of eight months each. The total fees are, respectively, $530, $525, $520 and $530. The registration for 1940-1941 was 266; graduates, 66. The next session begins Oct. 6, 1941, and ends June 13, 1942. The Dean is Edward W. Koch, M.D.

New York

COLUMBIA UNIVERSITY COLLEGE OF PHYSICIANS AND SURGEONS, 630 West One Hundred and Sixty-Eighth Street.—The medical faculty of Columbia College, then known as King's College, was organized in 1767. Instruction was interrupted by the War of the Revolution. The faculty was reestablished in 1792 and merged in 1814 with the College of Physicians and Surgeons, which had received an independent charter in 1807. In 1860 the College of Physicians and Surgeons became the Medical Department of Columbia College. This merger became permanent by legislative enactment in 1891. Columbia College became Columbia University in 1896. The medical school has been coeducational since 1917. The faculty is composed of 280 professors and 592 instructors, demonstrators and others, a total of 872. Three years of collegiate work are required for admission. The work covers four years of eight months each. The total fees are, respectively, $545, $530, $530 and $550. The registration for 1940-1941 was 411; graduates, 104. The next session begins Sept. 18, 1941, and ends June 2, 1942. Because of the existing emergency a special session (optional) of the senior class has been arranged and began June 1 and will end in February. The Dean is Willard C. Rappleye, M.D.

NEW YORK MEDICAL COLLEGE, FLOWER AND FIFTH AVENUE HOSPITALS, 1 East 105th Street.—Organized in 1858. Incorporated in 1860 as the Homeopathic Medical College of the State of New York. The title New York Homeopathic Medical College was assumed in 1869; the title New York Homeopathic Medical College and Hospital in 1887; the title New York Homeopathic Medical College and Flower Hospital in 1908; the title New York Medical College and Flower Hospital in 1936; the present title of New York Medical College, Flower and Fifth Avenue Hospitals, June 22, 1938. The first class graduated in 1861. Coeducational since 1919. A baccalaureate degree or its equivalent required for admission. The course covers four years of eight months each. It has a faculty of 64 professors and associate professors, 39 assistant professors, and 250 lecturers and assistants, a total of 353. The fees are, respectively, $645, $635, $635 and $665. The registration for 1940-1941 was 305; graduates, 67. The next session begins Sept. 15, 1941, and ends June 5, 1942. The Acting Dean is J. A. W. Hetrick, M.D.

NEW YORK UNIVERSITY COLLEGE OF MEDICINE, 477 First Avenue.—The Medical Department of New York University (then called the University of the City of New York) was organized in 1841. In 1898 it united with the Bellevue Hospital Medical College, organized in 1861, under the name of University and Bellevue Hospital Medical College. In 1935 the name was changed to New York University College of Medicine. Coeducational since 1919. The faculty is composed of 163 professors, associate, assistant, clinical and assistant clinical professors, and 377 lecturers, instructors and others, a total of 540. The course covers four years. Entrance requirements are that all candidates must have completed three full years of study in an approved college of arts and sciences. The fees for each of the four years are $600. The registration for 1940-1941 was 499; graduates, 122. The next session begins Sept. 17, 1941, and ends June 10, 1942. The Dean is Currier McEwen, M.D.

CORNELL UNIVERSITY MEDICAL COLLEGE, 1300 York Avenue.—Organized in 1898. Coeducational since organization. The first year was given to approximately one-third of the class at Ithaca, but in 1938 this branch was discontinued and all work is now given in New York City. The faculty is composed of 152 professors and 315 assistants, lecturers, instructors, and others, a total of 467. All candidates for admission must be graduates of approved colleges or scientific schools, or seniors of approved colleges that will permit them to substitute the first year of this medical school for the fourth year of their college course and will confer on them the baccalaureate degree on the completion of the first year's work. The fees are, respectively: $620, $610, $615 and $525. The registration for 1940-1941 was 294; graduates, 63. The next session begins Sept. 16, 1941, and ends June 10, 1942. The Dean is William S. Ladd, M.D.

Rochester

UNIVERSITY OF ROCHESTER SCHOOL OF MEDICINE AND DENTISTRY, 260 Crittenden Boulevard.—Organized in 1925 as the Medical Department of the University of Rochester. Coeducational since organization. The faculty is composed of 64 professors, 220 lecturers, assistants, instructors and others, a total of 284. The work embraces a graded course of four years of nine months each. Three years of collegiate work are required for admission. The total fees for each year are $500. The registration for 1940-1941 was 202; graduates 43. The next session begins Sept. 15, 1941, and ends June 13, 1942. The Dean is George Hoyt Whipple, M.D.

Syracuse

SYRACUSE UNIVERSITY COLLEGE OF MEDICINE, 766 Irving Avenue.—Organized in 1872, when the Geneva Medical College, chartered in 1834, was removed to Syracuse, under the title "The College of Physicians and Surgeons of Syracuse University." Present title assumed in 1875, when a compulsory three-year graded course was established. The first class graduated in 1873 and a class graduated each subsequent year. In 1889 the amalgamation with the university was made complete. Course extended to four years in 1896. Coeducational since organization. The faculty is composed of 48 professors and 181 associate and assistant professors, lecturers and instructors, a total of 229. Three years of a recognized college course are required for admission. The course covers four years of thirty-four weeks each. The fee for each of the first three years is $600; for the fourth year, $610. The enrolment for 1940-1941 was 164; graduates, 42. The next session begins Sept. 22, 1941, and ends June 8, 1942. The Dean is H. G. Weiskotten, M.D.

NORTH CAROLINA

Durham

DUKE UNIVERSITY SCHOOL OF MEDICINE.—Organized in 1925. The first class was admitted, Oct. 1, 1930. Coeducational. The faculty is composed of 10 professors and 178 associate and assistant professors, lecturers, instructors and assistants, a total of 188. The entrance requirements are ninety hours of collegiate work. The academic year consists of four quarters of eleven weeks each. Students either may study four quarters each year after the first year, and if satisfactory will receive the M.D. certificate after three and one quarter calendar years, or three quarters in each year, and if satisfactory will be graduated after four calendar years. The B.S. degree in medicine may be conferred for special work after six quarters. Students are urged to spend three years in hospital or laboratory work after graduation and must give assurance satisfactory to the executive committee that they will spend at least two years. The fees are $450 for each year of three quarters. The registration for 1940-1941 was 262; graduates, 65. During 1941-1942 the quarters begin October 2, January 5, March 30 and June 23 and end December 20, June 13, March 21 and September 5. The Dean is Wilburt C. Davison, M.D.

OHIO

Cincinnati

UNIVERSITY OF CINCINNATI COLLEGE OF MEDICINE, Eden and Bethesda Avenues.—Organized in 1909 by the union of the Medical College of Ohio (founded in 1819) with the Miami Medical College (founded in 1852). The Medical College of Ohio became the Medical Department of the University of Cincinnati in 1896. Under a similar agreement, March 2, 1909, the Miami Medical College also merged with the University when the title of Ohio-Miami Medical College of the University of Cincinnati was taken. Present title assumed in 1915. Coeducational since organization. Candidates for admission to the freshman class must present three years of college preparation of not less than ninety hours. Liberal Arts students of the University of Cincinnati may sign up for the seven-year combined Liberal Arts and Medical program. The B.Sc., degree is granted on the joint recommendation of the Faculties of the Colleges of Liberal Arts and Medicine at the end of the first medical year. The faculty consists of 112 professors, associate and assistant professors, 350 instructors, etc., a total of 462. The course covers four years of eight months each, on the completion of which the M.D. degree is granted. Beginning with the fall session of 1941-1942 the fees will be as follows: For legal residents of Cincinnati, $485 a year, plus breakage fees, ($50 additional for those not legal residents of Cincinnati). The registration for 1940-1941 was 306, graduates 151. The next session begins Sept. 22, 1941, and ends June 5, 1942. Because of the existing emergency a special session (optional) of the senior class has been arranged and began June 23. Students will complete the required work in February but will graduate with the regular class in June. The Dean is Stanley Dorst, M.D.

Cleveland

WESTERN RESERVE UNIVERSITY SCHOOL OF MEDICINE, 2109 Adelbert Road.—Organized in 1843 as the Cleveland Medical College in cooperation with Western Reserve College. The first class graduated in 1844. It assumed the present title in 1881. In 1910 the Cleveland College of Physicians and Surgeons was merged. Coeducational since 1919. The faculty includes 87 professors and 236 lecturers, assistants and others, a total of 323. The curriculum covers three years of nine months each and one year of ten months. Three years of collegiate work are required for admission and a baccalaureate degree for graduation. The total fees are, respectively, $553, $537, $516 and $526. The registration for 1940-1941 was 282; graduates, 63. The next session begins Sept. 25th, 1941, and ends June 17th, 1942. The Dean is Torald Sollmann, M.D.

Columbus

OHIO STATE UNIVERSITY COLLEGE OF MEDICINE, Neil and Eleventh Avenues.—Organized in 1907 as the Starling-Ohio Medical College by the union of Starling Medical College (organized in 1847 by charter granted by the State Legislature changing the name from Willoughby Medical College, which was chartered March 3, 1834) with the Ohio Medical University (organized 1890). In 1914 it became an integral part of the Ohio State University with its present title. Coeducational since organization. The faculty consists of 79 professors, associate and assistant professors, 77 lecturers, instructors, demonstrators and others, a total of 156. Three years of collegiate work are required for admission. The course covers four years of thirty-four weeks each. Tuition fees are $327 for the first year, and $312 for each of the other three years for residents of Ohio, and $150 additional for nonresidents. The registration for 1940-1941 was 295; graduates, 68. The next session begins Sept. 30, 1941, and ends June 15, 1942. The Dean is Hardy A. Kemp, M.D.

OKLAHOMA

Oklahoma City

UNIVERSITY OF OKLAHOMA SCHOOL OF MEDICINE, 801 East Thirteenth Street.—Organized in 1900. Until 1910 gave only the first two years of the medical course at Norman, Oklahoma, after which a clinical department was established at Oklahoma City by taking over the Medical School of Epworth University. The first class graduated in 1911. Coeducational since organization. Since September, 1928, the entire four-year course has been given in Oklahoma City. It has a faculty of 28 professors, 27 associate professors, 20 assistant professors and 125 associates, lecturers, visiting lecturers, instructors and assistants, a total of 200. Three years

of college work are required for admission. The course covers four years of nine months each. Fees: $50 "Maintenance and Incidental Fee" per semester. Other annual course fees average $128, $95, $53, and $58, in the order given, beginning with the freshman year. For students not residents of Oklahoma there is a tuition charge of $400 a year, plus laboratory and course fees as indicated for the different years. The registration for 1940-1941 was 235; graduates 54. The next session begins Sept. 15, 1941, and ends June 8, 1942. The Dean is Robert U. Patterson, M.D.

OREGON

Portland

UNIVERSITY OF OREGON MEDICAL SCHOOL, Marquam Hill.—Organized in 1887. The first class graduated in 1888, and a class graduated each subsequent year except 1898. The Willamette University Medical Department was merged in 1913. Coeducational since organization. It has a faculty of 91 professors and 164 lecturers, assistants and others, a total of 255. Entrance requirements are three years of collegiate work. The course covers four years of thirty-three weeks each. The total fees are, respectively, $380, $375, $370 and $376 for residents of Oregon, and $60 a year additional for nonresidents. The registration for 1940-1941 was 248; graduates, 62. The next session begins Oct. 2, 1941, and ends June 13, 1942. The Dean is Richard B. Dillehunt, M.D.

PENNSYLVANIA

Philadelphia

THE HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA, 235 North Fifteenth Street.—Organized in 1848 as The Homeopathic Medical College of Pennsylvania. In 1869 it united with The Hahnemann Medical College of Philadelphia, taking the latter title. Assumed present title in 1885. The first class graduated in 1849. Coeducational beginning with 1941-1942 session. Three years of collegiate work in an approved college of arts and sciences are required for admission. It has a faculty of 80 professors and 158 lecturers, instructors, and others, a total of 238. The work covers four years of eight months each. Fees are, respectively, $515, $512, $512 and $535. The registration for 1940-1941 was 544; graduates, 130. The next session begins Sept. 22, 1941, and ends June 11, 1942. The Dean is William A. Pearson, M.D.

JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA, 1025 Walnut Street. —Organized in 1825 as the Medical Department of Jefferson College, Canonsburg, Pa. It was chartered with its present title in 1838. Classes have been graduated annually beginning 1826. In 1838 a separate university charter was granted without change of title, since which time it has continued under the direction of its own board of trustees. It has a faculty of 79 professors, associate and assistant professors and 204 associates, lecturers, demonstrators and instructors, a total of 283. Four years of college work and a bachelor's degree are required for admission. The course of study covers four years of eight and one-half months each. The total fees are, respectively, $455, $440, $430 and $430. The registration for 1940-1941 was 508; graduates, 120. The next session begins Sept. 17, 1941, and ends June 5, 1942. The Acting Dean is Randle C. Rosenberger, M.D.

TEMPLE UNIVERSITY SCHOOL OF MEDICINE, 3400 North Broad Street. —Organized in 1901. The first class graduated in 1904. Coeducational since organization. The faculty numbers 33 professors and 223 associates, assistants and others, a total of 256. Three years of collegiate work are required for admission. The fees for each of the four years, respectively, are $500, $490, $480 and $500. The registration for 1940-1941 was 435; graduates, 112. The next session begins Sept. 17, 1941, and ends June 11, 1942. The Dean is William N. Parkinson, M.D.

UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE, Thirty-Sixth and Pine Streets.—Organized in 1765. Classes were graduated in 1768 and in all subsequent years except 1772 and 1775-1779, inclusive. The original title was the Department of Medicine, College of Philadelphia. The present title was adopted in 1909. It granted the first medical diploma issued in America. In 1916 it took over the Medico-Chirurgical College of Philadelphia to develop it as a graduate school. Coeducational since 1914. The faculty consists of 125 professors, associate and assistant professors, and 429 lecturers, associates, instructors and others, a total of 554. Three years of collegiate work are required for admission. The course covers four years of thirty-three weeks each. The tuition fee is $500 each year, with a deposit fee of $15, a general fee including student health of $15 and a matriculation fee of $5. The registration for 1940-1941 was 486; graduates, 125. The next session begins Sept. 22, 1941, and ends June 10, 1942. Because of the existing emergency the senior year will begin September 2 and end before May 1. The Dean is William Pepper, M.D.

WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA, Henry Avenue and Abbottsford Road, East Falls.—Organized in 1850. Classes were graduated in 1852 and in all subsequent years except 1862. It has a faculty of 77 professors and 64 assistants, lecturers and others, a total of 141. At least three years of collegiate work are required for admission and candidates with a degree are given preference. The curriculum covers four years of eight and one-half months each. Total fees are $450 yearly. The registration for 1940-1941 was 115; graduates 23. The next session begins Sept. 17, 1941, and ends June 10, 1942. The Dean is Margaret D. Craighill, M.D.

Pittsburgh

UNIVERSITY OF PITTSBURGH SCHOOL OF MEDICINE, Bigelow Boulevard. —Organized in 1886, as the Western Pennsylvania Medical College and in 1908 became an integral part of the University of Pittsburgh, removing to the university campus in 1910. The first class graduated in 1887. Coeducational since 1899. The faculty is composed of 30 professors and 348 associates, assistants and others, a total of 378. Entrance requirements are two years of collegiate work. The course of study is four years of eight months each. The total fees are $500 each year. The registration for 1940-1941 was 291; graduates, 55. The next session begins Sept. 22, 1941, and ends June 10, 1942. The Dean is W. S. McElroy, M.D.

SOUTH CAROLINA

Charleston

MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA, 16 Lucas Street.—Organized in 1823 as the Medical College of South Carolina. The first class graduated in 1825. In 1832 a medical college bearing the present title was chartered and the two schools continued as separate institutions until they were merged in 1838. Classes were graduated in all years except 1862 to 1865, inclusive. In 1913, by legislative enactment, it became a state institution. Coeducational from 1895 to 1912, when privileges for women were withdrawn, being restored in 1917. It has a faculty of 49 professors and 42 associates, instructors and others, a total of 91. The course covers four years of eight months each. Three years of collegiate work are required for admission. The total fees are $272 each year. Fees for nonresidents of the state, $422 each year. The enrolment for 1940-1941 was 173; graduates, 45. The next session begins Sept. 25, 1941, and ends June 4, 1942. The Dean is Robert Wilson, M.D.

TENNESSEE

Memphis

UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE, 874 Union Avenue.—Organized in 1876 at Nashville as Nashville Medical College. First class graduated 1877, and a class graduated each subsequent year. Became Medical Department of University of Tennessee in 1879. In 1909 it united with the Medical Department of the University of Nashville to form the joint Medical Department of the Universities of Nashville and Tennessee. This union was dissolved in 1911. The trustees of the University of Nashville by formal action of that board named the University of Tennessee College of Medicine as its legal successor. In 1911 it moved to Memphis, where it united with the College of Physicians and Surgeons. The Memphis Hospital Medical College was merged in 1913. Lincoln Memorial University Medical Department was merged in 1914. Coeducational since 1911. The faculty includes 106 professors and 146 assistants, instructors and others, a total of 252. Two years of collegiate work are required for admission. The B.S. degree in medicine is conferred at the end of the second year. The fees are $120 quarterly. For residents of the state the charge is reduced $50 each quarter. The registration for 1940-1941 was 461; graduates, 110. During the academic year of 1941-1942 the quarters begin July 8, Sept. 25, Jan. 2, and March 23, and end Sept. 24, Dec. 13, March 21 and June 10. The Dean is O. W. Hyman, Ph.D.

Nashville

MEHARRY MEDICAL COLLEGE, Eighteenth Avenue North and Heffernan Street. (For Negro Youth.)—This school was organized in 1876 as the Meharry Medical Department of Central Tennessee College, which became Walden University in 1900. First class graduated in 1877. Obtained new charter independent of Walden University in 1915. Coeducational since 1876. The faculty is made up of 49 professors and 30 instructors and lecturers, a total of 79. Three years' work in a college of liberal arts is required for admission. The curriculum covers four years of thirty-two weeks each. Tuition fees are, respectively, $300, $290, $280 and $295 each year. The registration for 1940-1941 was 216; graduates, 48. The next session begins Oct. 1, 1941, and ends May 26, 1942. The Dean is Edward L. Turner, M.D.

VANDERBILT UNIVERSITY SCHOOL OF MEDICINE, Twenty-First Street at Edgehill.—This school was founded in 1874. The first class graduated in 1875. Coeducational since September 1925. The faculty numbers 243. For matriculation, students must be graduates of collegiate institutions of recognized standing or seniors in absentia, who will receive the bachelor degree from their college after having completed successfully at least one year of work in the school of medicine. The course covers four years of nearly nine months each. The total fees are, respectively, $465, $465, $465 and $470. The registration for 1940-1941 was 206; graduates, 54. The next session begins Sept. 22, 1941, and ends June 10, 1942. The Dean is Waller S. Leathers, M.D.

TEXAS

Dallas

BAYLOR UNIVERSITY COLLEGE OF MEDICINE, 810 College Avenue.— Organized in 1900 as the University of Dallas Medical Department. In 1903 it took its present name and became the Medical Department of Baylor University. It acquired the charter of Dallas Medical College in 1904. Coeducational since organization. The first class graduated in 1901. The faculty consists of 119 professors and 112 instructors and assistants, a total of 231. Entrance requirements are three years of collegiate work. The course covers four years of eight months each. The fees are, respectively, $419, $409, $399 and $424. The registration for 1940-1941 was 306, graduates, 64. The next session begins Sept. 29, 1941, and ends June 1, 1942. The Dean is W. H. Moursund, M.D.

Galveston

UNIVERSITY OF TEXAS MEDICAL BRANCH, 912 Avenue B. Organized in 1891. The first class graduated in 1892. Coeducational since organization. It has a faculty of 40 professors and 107 instructors and assistants, a total of 147. Beginning with the 1941-1942 session the curriculum was changed to the four quarter plan, each quarter lasting eleven weeks. The total fees are, respectively, $46, $27, $39 and $37. Included

in this is a matriculation fee of $17 per quarter. The registration for 1940-1941 was 382; graduates, 85. During 1941-1942 the quarters begin June 16, Oct. 1, Jan. 2 and March 26 and end Aug. 31, Dec. 20, March 19 and June 9. The Dean is John W. Spies, M.D.

VERMONT

Burlington

UNIVERSITY OF VERMONT COLLEGE OF MEDICINE, Pearl Street, College Park.—Organized with complete course in 1822. Classes graduated in 1823 to 1836, inclusive, when the school was suspended. It was reorganized in 1853 and classes were graduated in 1854 and in all subsequent years. Coeducational since 1920. It has a faculty of 64 professors and 54 instructors, and assistants, a total of 118. Three years of collegiate work are required for admission. The course of study covers three years of nine months each and a fourth year of eleven months. For residents of Vermont the tuition fee is $400 each session. Nonresidents are charged an additional $150 each session. A $25 fee is charged for the doctor's degree. The registration for 1940-1941 was 124; graduates, 31. The next session begins Sept. 19, 1941, and ends June 15, 1942. The Chairman of the Administrative Committee is Clarence H. Beecher, M.D.

VIRGINIA

Charlottesville

UNIVERSITY OF VIRGINIA DEPARTMENT OF MEDICINE.—Organized in 1827. Classes were graduated in 1828 and in all subsequent years except 1865. Coeducational since the session of 1920-1921. It has a faculty of 45 professors and 41 lecturers, instructors, assistants and others, a total of 86. Three years of college work are required for admission. For residents of Virginia the total fees are, respectively, $419, $401, $366 and $366. Nonresidents are charged an additional $50 each year. The registration for 1940-1941 was 250; graduates, 54. The next session begins Sept. 18, 1941, and ends June 15, 1942. The Dean is Harvey Ernest Jordan, Ph.D.

Richmond

MEDICAL COLLEGE OF VIRGINIA, Twelfth and Marshall Streets.—Organized in 1838 as the Medical Department of Hampden Sydney College. Present title was taken in 1854. In 1913 the University College of Medicine was merged. In 1914 the North Carolina Medical College was merged. Coeducational since 1918. Classes were graduated in 1839 and in all subsequent years. It has a faculty of 81 professors and 147 lecturers, instructors and others, a total of 228. Three years of collegiate work are required for admission. The course covers four years of eight and one-half months each. Total fees are, respectively, $379, $379, $379 and $381. Nonresidents are charged an additional $125 each year. The registration for 1940-1941 was 295; graduates, 74. The next session begins Sept. 2, 1941, for the first year class; Sept. 15, 1941, for all other classes, and ends June 2, 1942. The Dean is Lee E. Sutton Jr., M.D.

WISCONSIN

Madison

UNIVERSITY OF WISCONSIN MEDICAL SCHOOL, 408 North Charter Street.—Organized in 1907. Gave only the first two years of the medical course until 1925, when the clinical years were added. Coeducational since organization. Three years of collegiate work are required for admission. The B.S. degree in medical science is conferred at the end of the first year. It has a faculty of 64 professors and 67 lecturers, instructors and others, a total of 131. The fees are, respectively, $222, $212, $182 and $120. An additional fee of $200 each year is charged nonresidents. The registration for 1940-1941 was 258; graduates, 48. The next session begins Sept. 24, 1941, and ends June 22, 1942. The Dean is William S. Middleton, M.D.

Milwaukee

MARQUETTE UNIVERSITY SCHOOL OF MEDICINE, 561 North Fifteenth Street.—Organized in December 1912, by the merger of the Milwaukee Medical College and the Wisconsin College of Physicians and Surgeons. Coeducational since organization. It has a faculty of 173. Three years of collegiate work are required for admission. The curriculum covers four years of eight and a half months each, and one years' internship in an approved hospital. The fees are as follows: first year, $462; second year, $450; third year, $450; fourth year, $400. The registration for 1940-1941 was 312; graduates, 72. The next session begins Sept. 29, 1941, and ends June 10, 1942. The Dean is Eben J. Carey, M.D.

CANADA

Alberta

UNIVERSITY OF ALBERTA FACULTY OF MEDICINE, Edmonton.—Organized in 1913. Coeducational since organization. Has given the complete six-year medical course since 1924. The Faculty includes 23 full time and 45 part time professors, instructors, assistants and others, a total of 68. Tuition for the second, third and fourth years is $215, for the fifth and sixth years $225. The registration for 1940-1941 was 201; graduates, 37. The next session begins Sept. 26, 1941, and ends April 10, 1942. Special session advancement of graduating class only, for military service, begins July 2, 1941, ends Feb. 28, 1942. The Acting Dean is John James Ower, M.D.

Manitoba

UNIVERSITY OF MANITOBA FACULTY OF MEDICINE, Bannatyne Avenue, Winnipeg. Organized in 1883 as Manitoba Medical College; first class graduated in 1886, and a class graduated each subsequent year. The college transferred all its property to the University of Manitoba in 1919 and assumed the present title. Coeducational since organization. The faculty includes 26 professors and 80 instructors and assistants, a total of 106. Matriculation requirements include two years of collegiate work in the faculty of arts and science of a recognized university. The course extends over four years of eight months each and a hospital internship. The total fees are, respectively, $298, $293, $303, $303, $77. The registration for 1940-1941 was 217; graduates, 62. The next session begins Sept. 12, 1941, and ends May 13, 1942. The Dean is A. T. Mathers, M.D.

Nova Scotia

DALHOUSIE UNIVERSITY FACULTY OF MEDICINE, Morris Street, Halifax.—Organized in 1867. Incorporated as the Halifax Medical College in 1875. Reorganized as an examining faculty, separate from the Halifax Medical College, in 1885. In 1911, in accordance with an agreement between the Governors of Dalhousie University and the Corporation of the Halifax Medical College, the work of the latter institution was discontinued and a full teaching faculty was established by the university. First class graduated in 1872. Coeducational since 1871. It has a faculty of 32 professors and 27 demonstrators, lecturers and others, a total of 59. Requires for matriculation two years of arts. The medical course covers four years and a hospital internship of one year. The fees are $317, $322, $317, $307 and $307 for each year, respectively; $250 additional registration fee payable by students outside the British Empire. The registration for 1940-1941 was 177, graduates, 41. The next session begins Sept. 9, 1941, and ends May 12, 1942. The Dean is H. G. Grant, M.D.

Ontario

QUEEN'S UNIVERSITY FACULTY OF MEDICINE, Kingston.—Organized 1854, first class graduated in 1855, and a class graduated each subsequent year. The faculty numbers 60. The fee for the first year is $233 and $255 for each of the other five years. The course covers six years of thirty teaching weeks each. The registration for 1940-1941 was 266; graduates, 42. The next session begins Sept. 25, 1941, and ends May 15, 1942. The Dean is Frederick Etherington, M.D.

UNIVERSITY OF TORONTO FACULTY OF MEDICINE, Toronto.—Organized in 1843 as the Medical Faculty of King's College. Abolished in 1853. Reestablished in 1887. In 1902 it absorbed Victoria University Medical Department, and in 1903 it absorbed the Medical Faculty of Trinity University. Coeducational since 1903. The course of study covers six years of eight months each. The B.Sc. (Med.) degree is conferred at the end of the third or sixth year. It has a faculty of 83 professors and 337 lecturers, associates and others, a total of 420. The fees are $226 for the first year; for the second, $389; $296 for the third year, $321 for the fourth and fifth years, and $353 for the sixth year. The registration for 1940-1941 was 747; graduates, 138. As there is a shortage of doctors in Canada, both for the armed forces and for civilian needs, the duration of the academic session of the Faculty of Medicine, University of Toronto, has been increased to ten months extending from Aug. 25, 1941, to June 27, 1942. The final year class will graduate in April, 1942 and every eight months thereafter. The next session begins Aug. 25, 1941, and ends June 27, 1942. The Dean is W. E. Gallie, M.D.

UNIVERSITY OF WESTERN ONTARIO MEDICAL SCHOOL, Ottaway Avenue, London.—Organized in 1881 as the Western University Faculty of Medicine; first class graduated in 1883, and a class graduated each subsequent year. Present title in 1923. The medical school has been under the control of the Board of Governors of the University of Western Ontario since 1913. Coeducational since 1913. The faculty numbers 89. The course of study covers six years of eight months each. The total fees to residents of Canada for the last four years, respectively, are $349, $345, $353 and $291; nonresidents are charged $637, $633, $641 and $516 for each of the last four years. The registration for 1941-1942 was 222; graduates, 30. Owing to war conditions, the next session begins for the sixth year July 2, 1941, and ends Feb. 28, 1942. Classes for the second, third, fourth and fifth years begin Aug. 25, 1941, and end June 27, 1942. The Dean is F. J. H. Campbell, M.D.

Quebec

LAVAL UNIVERSITY FACULTY OF MEDICINE, Quebec.—The Quebec School of Medicine, organized in 1848, became in 1852 the Laval University Faculty of Medicine; first class graduated in 1855, and a class graduated each subsequent year. The faculty numbers 89. The fees for each of the medical years are $175 for residents of Canada. Nonresidents are charged an extra fee of $175 each year. The premedical requirement is a B.A. degree or its equivalent. The registration for 1940-1941 was 315; graduates, 69. The next session begins Sept. 10, 1941, and ends May 30, 1942. The Dean is Charles Vézina, M.D.

MCGILL UNIVERSITY FACULTY OF MEDICINE, 3640 University Street, Montreal.—Founded in 1823 as Montreal Medical Institution; became the Medical Faculty of McGill University in 1829; first class graduated under the university auspices in 1833. No session between 1836-1839, owing to political troubles. In 1905 it absorbed the Faculty of Medicine of the University of Bishop's College. Coeducational since 1919. Three years of collegiate work are required for admission. The M.D. is conferred upon the completion of four sessions of 36 teaching weeks. The faculty consists of 58 professors and 188 lecturers and others, a total of 246. The total fee for each of the four medical years are $391 plus $100 for non-British subjects. The registration for 1940-1941 was 385; graduates, 89. The next session begins Sept. 3, 1941, and ends May 31, 1942. The Dean is J. C. Meakins, M.D.

UNIVERSITY OF MONTREAL FACULTY OF MEDICINE, 1265 St. Denis Street, Montreal.—Organized in 1843 as the Montreal School of Medicine and Surgery. In 1891, by Act of Parliament, the Medical Faculty of Laval University (organized in 1878) was absorbed. Present name by Act of Parliament in 1920. A class was graduated in 1843 and each subsequent year. Coeducational since 1925. The faculty numbers 140. The B.A. or B.S. degree, or its equivalent, is a prerequisite to the premedical year, which precedes a five year medical course, the fifth year being a compulsory internship year. The total fees for each of the five years respectively are $245, $229, $271, $235, $218. The registration for 1940-1941 was 203; graduates, 54. The next session begins Sept. 15, 1941, and ends June 15, 1942. The Dean is Albert LeSage, M.D.

DESCRIPTION OF SCHOOLS OF THE BASIC MEDICAL SCIENCES

ALABAMA

University (Tuscaloosa)

UNIVERSITY OF ALABAMA SCHOOL OF MEDICINE.—Organized in 1859 at Mobile as the Medical College of Alabama. Classes graduated in 1861 and subsequent years excepting 1862 to 1868, inclusive. Reorganized in 1897 as the medical department of the University of Alabama. Present title assumed in 1907, when all property was transferred to the University of Alabama. In 1920 clinical teaching was suspended and the medical school was removed to the university campus near Tuscaloosa. Coeducational since 1920. Minimum entrance requirements are three years of collegiate work. The course of study covers two years of thirty-six weeks each. The faculty includes 15 professors and 14 instructors, assistants, and others, a total of 29. The tuition fees are $301 each year plus $75 differential for nonresidents. Each class is limited to fifty students. The registration for 1940-1941 was 101. The next session begins Sept. 10, 1941, and ends May 27, 1942. The Dean is Stuart Graves, M.D.

MISSISSIPPI

University

UNIVERSITY OF MISSISSIPPI SCHOOL OF MEDICINE.—Organized in 1903. Coeducational since organization. Gives only the first two years of the medical course. A clinical department was established at Vicksburg in 1908 but was discontinued in 1910 after graduating one class. The session extends over eight and one-half months. Entrance requirement is three years of collegiate work. The B.S. degree in medicine is conferred at the end of the second year. The faculty includes 8 professors, 2 assistant professors, 1 associate professor, 1 adjunct professor, 20 instructors, assistants and others, a total of 32. The total fees for the first year are $353, and for the second year $325. The nonresident fee is $50 additional each year. The registration for 1940-1941 was 46. The next session begins Sept. 18, 1941, and ends June 1, 1942. The Dean is B. S. Guyton, M.D.

MISSOURI

Columbia

UNIVERSITY OF MISSOURI SCHOOL OF MEDICINE.—Organized at St. Louis in 1845; was discontinued in 1855 but was reorganized at Columbia in 1872. Teaching of the clinical years was suspended in 1909. Coeducational since 1872. The faculty includes 21 professors and 14 instructors, lecturers and others, a total of 35. The entrance requirements are 90 semester hours of collegiate work. The B.S. degree in medicine is conferred at the end of the second year. Total fees for the first year are $191, for the second, $177. The registration for 1940-1941 was 83. The next session begins Sept. 15, 1941, and ends June 12, 1942. The Dean is Dudley S. Conley, M.D.

NEW HAMPSHIRE

Hanover

DARTMOUTH MEDICAL SCHOOL.—Organized by Dr. Nathan Smith in 1797. The first class graduated in 1798. It is under the control of the trustees of Dartmouth College. Courses of the third and fourth year were discontinued in 1914. The faculty consists of 21 professors and 11 instructors, a total of 32. Three years of collegiate work and candidacy for the bachelor's degree are required for admission. The course covers nine calendar months in each year, or eight months of actual teaching. Candidates for the A.B. degree in Dartmouth College may substitute the work of the first year in medicine for that of the senior year in the academic department. The tuition is $450 for each year. The registration for 1940-1941 was 41. The next session begins Sept. 17, 1941, and ends June 14, 1942. The Dean is John P. Bowler, M.D.

NORTH CAROLINA

Chapel Hill

UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE.—Organized in 1890. Until 1902 this school gave only the work of the first two years, when the course was extended to four years by the establishment of a department in Raleigh. The first class graduated in 1903. A class was graduated each subsequent year, including 1910, when the clinical department at Raleigh was discontinued. Coeducational since 1914. A minimum of three years of college work is required for admission. Certificates are awarded on the completion of the two years' work in medicine. The faculty is composed of 16 professors and 13 instructors, a total of 29. The fees for each year are $300 for residents; for nonresidents an additional fee of $100. The registration for 1940-1941 was 78. The next session begins Sept. 23, 1941, and ends June 9, 1942. The Acting Dean is W. Reece Berryhill, M.D.

Winston-Salem

WAKE FOREST COLLEGE SCHOOL OF MEDICAL SCIENCES, formerly at Wake Forest, N. C., has been moved to Winston-Salem, N. C., and will hereafter be known as the BOWMAN GRAY SCHOOL OF MEDICINE OF WAKE FOREST COLLEGE. Organized in 1902 as a part of Wake Forest College. The Board of Trustees has authorized the extension of the curriculum to include four years of instruction leading to the degree of doctor of medicine. The new plant in Winston-Salem is under the same roof as the North Carolina Baptist Hospital. The faculty numbers 22 professors and 80 assistant professors, instructors, assistants and lecturers, making a total of 102. Ninety semester hours of college work are required for admission. The B.S. degree is given after the completion of the first year to those not already holding that degree. Each academic year extends over nine months. Tuition for each academic year is $450. Registration for the year 1940-1941 was 66. The next session begins Sept. 10, 1941, and ends June 1, 1942. The Dean is C. C. Carpenter, M.D.

NORTH DAKOTA

Grand Forks

UNIVERSITY OF NORTH DAKOTA SCHOOL OF MEDICINE.—Organized in 1905. Offers only the first two years of the medical course. Coeducational since organization. Three years' work in a college of liberal arts is required for admission. The B.S degree in combined arts-medical course is conferred at the end of the second year. The faculty consists of 8 professors and 8 instructors, a total of 16. The fees are $80 each year for resident students and $165 for nonresidents. The registration for 1940-1941 was 47. The next session begins Sept. 16, 1941, and ends June 9, 1942. The Dean is H. E. French, M.D.

SOUTH DAKOTA

Vermillion

UNIVERSITY OF SOUTH DAKOTA SCHOOL OF MEDICAL SCIENCES.—Organized in 1907 as the University of South Dakota School of Medicine. Present title in 1937. Coeducational since organization. Offers only the first two years of the medical course. Three years' work in a college of liberal arts is required for admission. Students who complete the third year of premedical work in the College of Arts and Sciences at the University of South Dakota may apply the work of the first year of medicine to the A.B. degree. The B.S. degree is conferred at the end of the second year on those students who do not hold a combination (Arts and Sciences and Medicine Course) A.B. degree. The faculty numbers 18. The tuition is $150 each year for residents and $250 for nonresidents. The registration for 1940-1941 was 45. The next session begins Sept. 18, 1941, and ends June 8, 1942. The Dean is Joseph C. Ohlmacher, M.D.

UTAH

Salt Lake City

UNIVERSITY OF UTAH SCHOOL OF MEDICINE, University Street.—Organized in 1906. Coeducational since organization. Gives only first two years of medical course. Each school year covers thirty-six weeks. Three years of collegiate work are required for admission. The medical faculty consists of 11 professors, 1 instructor, 21 lecturers and demonstrators, and 5 fellows, assistants, and technicians, a total of 38. The fees for each year are $229. There is a nonresident fee of $75 each year. The registration for 1940-1941 was 63. The next session begins Sept. 29, 1941, and ends June 5, 1942. The Dean is L. L. Daines, M.D.

WEST VIRGINIA

Morgantown

WEST VIRGINIA UNIVERSITY SCHOOL OF MEDICINE.—Organized in 1902, gives the first two years of the medical course. Coeducational since organization. Three years of collegiate work are required for admission. The B.S. degree in medicine is conferred at the end of the second year. Session extends through nine months. Faculty numbers 24. Fees for residents of the state are, respectively, $254 and $264; nonresidents, $150 additional each year. The registration for 1940-1941 was 45. The next session begins September 18, 1941, and ends June 8, 1942. The Dean is Edward J. Van Liere, M.D.

CANADA

Saskatchewan

UNIVERSITY OF SASKATCHEWAN SCHOOL OF MEDICAL SCIENCES, Saskatoon.—Organized in 1926. Coeducational. Offers the first two years of the medical course. Two years of collegiate work are required for admission. The B.A. degree is conferred at the end of the second year. The medical faculty includes 7 professors and 4 lecturers and assistants, a total of 11. The fees are $150 for each year. The registration for 1940-1941 was 49. The next session begins Sept. 22, 1941, and ends May 8, 1942. The Dean is W. S. Lindsay, M.B.

GRADUATE MEDICAL EDUCATION

Internships and Residences

The work of the Council in the field of internships and residencies is commented on at length in the Hospital Number of THE JOURNAL.[1] Two very timely subjects are presented in this issue because of their current interest.

NECROPSY PERFORMANCE

The list of hospitals approved for intern training which achieved the commendable record of necropsies in 70 per cent or more of their cases of death is presented herewith. It will be noted that the list contains the names of forty institutions, an increase of eleven over the previous high reported in 1940.[2] It is especially gratifying that small as well as large institutions have manifested this interest in educational work and that the list includes non-tax supported as well as public hospitals. In the group are institutions which are not connected with medical schools and also hospitals sponsored by various religious denominations.

Hospitals in Which Necropsies Exceeded Seventy per Cent of Fatalities

	Control	Necropsy Percentage
1. Research and Educational Hospital, Chicago	State	86.7
2. University of Nebraska Hospital, Omaha	State	85.9
3. Letterman General Hospital, San Francisco	Army	85.7
4. Station Hospital (Fort Sam Houston), San Antonio, Texas	Army	85.7
5. Beverly Hospital, Beverly, Mass.	NPAssn	85.1
6. Colorado General Hospital, Denver	State	83.8
7. Walter Reed General Hospital, Washington, D. C.	Army	82.4
8. Presbyterian Hospital, Philadelphia	Church	82.2
9. Iowa Methodist Hospital, Des Moines, Iowa	Church	79.3
10. University of Minnesota Hospitals, Minneapolis	State	79.2
11. Evanston Hospital, Evanston, Ill.	NPAssn	78.8
12. Trinity Hospital, Minot, N. D.	Church	78.8
13. Hosp. of the Protestant Episcopal Church, Philadelphia	Church	78.4
14. University of Chicago Clinics, Chicago	NPAssn	78.2
15. Kansas City General Hospital No. 1, Kansas City, Mo.	City	78.1
16. U. S. Naval Hospital, San Diego	Navy	77.7
17. Mary Hitchcock Memorial Hospital, Hanover, N. H.	NPAssn	77.6
18. Columbus Hospital, Chicago	Church	77.3
19. Santa Barbara Cottage Hospital, Santa Barbara, Calif.	NPAssn	76.5
20. St. Luke's Hospital, Kansas City, Mo.	Church	76.2
21. U. S. Naval Hospital, Washington, D. C.	Navy	76.0
22. Massachusetts Memorial Hospitals, Boston	NPAssn	76.0
23. William Beaumont General Hospital, El Paso, Texas	Army	75.5
24. State of Wisconsin General Hospital, Madison	State	74.7
25. St. Margaret's Hospital, Kansas City, Kan.	Church	74.3
26. U. S. Marine Hospital, Norfolk, Va.	USPHS	74.0
27. Santa Barbara General Hospital, Santa Barbara, Calif.	County	73.8
28. St. Joseph's Hospital, Kansas City, Mo.	Church	73.7
29. Hospital for Children, San Francisco	NPAssn	73.6
30. U. S. Marine Hospital, Seattle	USPHS	72.9
31. Albany Hospital, Albany, New York	NPAssn	72.8
32. Queen's Hospital, Honolulu, Hawaii	NPAssn	72.6
33. Johns Hopkins Hospital, Baltimore	NPAssn	72.6
34. Strong Memorial and Rochester Municipal Hospitals, Rochester, N. Y.	NPAssn	72.6
35. Wesley Memorial Hospital, Chicago	Church	72.2
36. Harris Memorial Methodist Hosp., Fort Worth, Texas	Church	72.2
37. Touro Infirmary, New Orleans	NPAssn	71.2
38. Montefiore Hospital for Chronic Diseases, New York	NPAssn	71.0
39. St. Luke's Hospital, Chicago	NPAssn	70.8
40. Passavant Memorial Hospital, Chicago	NPAssn	70.2

INTERNS AND RESIDENTS ENTERING MILITARY SERVICE 1940-1941

Late in June and early in July of this year the Council sent a questionnaire to one thousand and forty-three hospitals approved for intern training, residency training or both. All approved hospitals except those operated by the Army and Navy were included. Returns were received from nine hundred and seventy institutions, or 93 per cent. The questions concerned the induction of interns and residents into active military service by order of local Selective Service boards and the interns and residents holding commissions in the Medical Reserve Corps of the Army and Navy who were called to active duty. A study of the returns indicates the following:

1. Only two graduates were inducted by order of Selective Service boards before completing at least one year of intern training.

2. Up to July 1, 1941 two hundred and seventy-eight interns and five hundred and sixty-nine residents holding commissions in the reserve corps entered the military service before the completion of their current hospital appointments.

3. Comments by hospital superintendents led to the belief that all medical graduates called up by Selective Service boards were given an opportunity to apply for commissions in the Medical Reserves of the Army or Navy.

4. According to the annual reports received from hospitals in January 1941 there were on duty in approved internship and residency hospitals 7,553 interns and 5,247 residents. These figures include women graduates and also men serving in army and navy hospitals.

5. From these data it appears that the preparedness program has not yet had as marked an effect on the house staffs of hospitals as might have been expected. However, hospitals probably will encounter increasing difficulty in maintaining their intern and resident staffs.

Continuation Study for Practicing Physicians in the United States, 1940-1941

Since 1937 the Council on Medical Education and Hospitals has been actively engaged in the collection of information on the facilities available throughout the United States for continuation study. Progress reports on this survey appeared in the Educational Number of THE JOURNAL of 1938,[3] 1939[4] and 1940.[5] A review of the developments and of the accomplishments in this phase of graduate medical education was published in composite form by the Council in May 1940.[6] The opportunities for continuation study have been reviewed again for the year 1940-1941 and are presented in the present report.

As a result of the Council's survey the Principles Regarding Graduate Medical Schools adopted in 1923 were revised by the Council on June 11, 1940 and approved by the House of Delegates. The need was recognized for adequate clinical facilities where physicians who do not limit their practice to a specialty may find ample opportunity to learn by personal examination of patients and by conduct of essential laboratory tests. The progressive grading of courses which would provide continuity of instruction as part of a systematic program over the years was emphasized. Institutions

(Continued on page 712)

1. J. A. M. A. **116**: 1067 (March 15) 1941.
2. J. A. M. A. **114**: 1172 (March 30) 1940.
3. J. A. M. A. **111**: 801 (Aug. 27) 1938.
4. J. A. M. A. **113**: 773 (Aug. 26) 1939.
5. J. A. M. A. **115**: 709 (Aug. 31) 1940.
6. Graduate Medical Education in the United States: Continuation Study for Practicing Physicians, 1937 to 1940, Chicago, American Medical Association.

TABLE 1.—CONTINUATION COURSES FOR PRACTICING PHYSICIANS, 1940-1941

A. In Proximity to Their Homes

Location of Course	Sponsoring Agencies	Director of Program	Subjects	Duration of Course	Time Given	Type of Instruction	Facilities for Graduate Programs	Instructors	Persons Eligible for Admission	Registration Fee	Approximate No. M.D.'s Attending	Additional Contributing Agencies and Funds
Alabama												
22 centers (4 circuits)	St. Med. Assn., St. Dept. Public Health, Med. Ext. Div., Tulane U. of La.	Director, Med. Ext. Div., Tulane U. of Louisiana	Gynecology, Surgery	6 evenings	Spring and Summer	Lectures, Clinics, Demonstrations, Round Table Discussions, Consultation Service	Hospitals and and other local facilities	Med. sch., out of state	Co. Med. Soc. members	$5	291 (3 circuits)	Commonwealth Fund
California												
Statewide	St. Med. Assn.	Secretary, Comm. on P. G. Activities	General	1 to 3 days	Throughout year	Lectures, Clinics, Symposiums, Demonstrations, Round Table Discussions	Hospitals	Med. sch. and in state	Co. Med. Soc. members	No	...	Co. Med. Socs.
Rural counties	St. Med. Assn., Calif. T. B. Assn.	Chairman, Comm. on P. G. Educ.	Communicable Diseases, Tuberculosis	1 day and evening	Throughout year	Lectures, Clinics	Hospitals, outpatient departments	Med. sch. and in state	Co. Med. Soc. members	No	575	.....
Colorado												
5 centers	St. Med. Soc.	Comm., Regional P. G. Courses	Heart and Kidney Affections	1 day weekly, 3 times	June	Lectures, Discussions, Presentation of Cases	Public buildings	Med. sch. and in state	Co. Med. Soc. members	$10	37	.....
Idaho												
5 centers	St. Dept. of Public Health	Director	Pediatrics, Obstetrics, Gynecology, Dermatology and Syphilology	5 to 6 days	Spring	Lectures, Clinics, Demonstrations	Hospitals, public buildings	Med. sch., out of state	M.D.'s	No	...	.....
Illinois												
9 centers	St. Med. Soc.	Chairman, Scientific Service Comm.	General	1 day	Throughout year	Lectures, Clinics, Demonstrations, Symposiums, Round Table Discussions	Hospitals, public buildings	Med. sch., in state and out of state	M.D.'s	No	1,388	St. Dept. of Health
Indiana												
9 centers	Indiana T. B. Assn.	Supt. of local sanatorium	Tuberculosis	1 day	Fall	Clinics, Demonstrations, Round Table Discussions	T. B. hospitals	In state and out of state	M.D.'s	No	135	.....
Statewide	St. Bd. of Health	Chief, Bur. of Mat. and Child Health	Obstetrics, Pediatrics	1 day weekly, 4 to 6 times	Throughout year	Lectures, motion pictures	Hospitals, public buildings	Med. sch., in state and out of state	M.D.'s	No	366	Indiana U. Sch. of Med., St. Med. Assn.
Iowa												
12 centers	St. Med. Soc.	Chairman, Speakers Bureau	General	Once weekly or monthly, 4 to 8 times	Spring and Fall	Lectures, Round Table Discussions	Hospitals and hotels	Med. sch. and in state and out of state	Co. Med. Soc. members	None to $8	650	St. Univ. of Iowa, St. Dept. of Health
Kansas												
10 centers	St. Bd. of Health and St. Med. Soc.	Secretary, St. Bd. of Health	Cancer, Tuberculosis	1 day	Spring	Lectures, Discussions	Public buildings	Med. sch. and in state and out of state	M.D.'s	No	470	U. S. Children's Bureau, Kan. T. B. and Health Assn.
Louisiana												
5 centers	St. Bd. of Health, St. Med. Soc.	Supervisor, Mat. and Child Health Services	Obstetrics, Pediatrics	1 day weekly, 6 times	Varies	Lectures, Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Public buildings	Med. sch., in state and out of state	M.D.'s	No	510	U. S. Children's Bureau
Massachusetts												
20 centers	St. Med. Soc. and Dept. of Public Health	Secretary, Exec. Comm. on P. G. Instruction	General	1 day weekly, 8 times	Throughout year	Lectures, Case Discussions	Hospitals, outpatient departments	In state and med. sch.	M.D.'s	No	718	U. S. Public Health Service, U. S. Children's Bureau
Michigan												
9 centers	Univ. of Mich. Med. Sch., St. Med. Soc.	Chairman, Dept. of P. G. Med.	General	1 day weekly, 8 times	April and October	Lectures, Clinics, Symposiums	Hospitals, public buildings	Med. sch. and in state	M.D.'s	No	1,038	St. Dept. of Health, Rackham Fund, Kellogg Foundation, Wayne U. Coll. Med.
Minnesota												
14 centers	Minn. Public Health Assn.	Executive Secretary	Tuberculosis	1 day	Varies	Lectures, Clinics, Demonstrations, Round Table Discussions	Hospitals, outpatient departments	Med. sch. and in state and out of state	M.D.'s	No	500	Co. Med. Soes., T. B. Sanatoriums

Mississippi											
10 centers	St. Med. Assn., St. Bd. of Health, Med. Ext. Div. Tulane U. of La.	Director, Med. Ext. Div., Tulane U. of Louisiana	Medicine, Tuberculosis	6 evenings	Throughout year	Lectures, Clinics, Demonstrations, Round Table Discussions, Consultations	Hospitals, public buildings	Med. sch., out of state	M.D.'s	$5	127	Commonwealth Fund
Missouri											
3 centers	Mo. T. B. Assn.	Exec. Secretary	Tuberculosis	1 evening	Varies	Lectures, Symposiums, Demonstrations, Round Table Discussions	Public buildings	In state	M.D.'s	No	179	None
Montana											
9 centers	St. Med. Assn. and St. Bd. of Health	Chairman, P. G. Educ. and Mat. and Child Health Comms.	Pediatrics and Obstetrics	2 days	May and June	Lectures, Round Table Discussions	Hospitals	Med. sch., out of state	M.D.'s	No	118	Social security funds
Nebraska											
18 centers	St. Dept. of Health, St. Med. Assn., Univ. of Neb. Coll. of Med.	Director, Div. of Mat. and Child Health	Obstetrics and Pediatrics	1 day, 1 to 4 times	Fall and Spring	Lectures, Clinics, Demonstrations, Round Table Discussions	Hospitals	Med. sch.	M.D.'s	No	200	Federal funds
New Jersey											
9 centers	St. Med. Soc.	Chairman, P. G. Comm.	Medicine and Surgery	1 day weekly, 6 times	Spring	Lectures, Demonstrations, Round Table Discussions	Hospitals	Med. sch., out of state	M.D.'s	None to $10	284	Rutgers University, Extension Division
9 centers	St. Dept. of Health, St. Med. Soc.	Chief, Div. of V. D. Control	Venereal Diseases	2 days weekly, 6 weeks	Fall and Spring	Lectures, Demonstrations	Hospitals, public buildings	Med. sch., in state and out of state	M.D.'s	No	412	Federal funds
New York											
30 centers	St. Med. Soc. and St. Dept. of Health	Chairman, Counc. Comm. on Public Health and Educ.	General	1 day weekly, 2 to 8 times	Throughout year	Lectures, Clinics, Demonstrations, Symposiums	Medical Schools, hospitals, outpatient departments, laboratories, public buildings	Med. sch. and in state	M.D.'s	No	1,459	Federal funds
North Carolina											
2 centers	U. of North Carolina Extension Div. and Med. Sch.	Asst. Director, Ext. Div.	General Medicine, Surgery	1 day weekly, 6 times	Spring	Lectures, Clinics, Symposiums, Clin. Path. Confs.	Hospitals and hotels	Med. sch., out of state	M.D.'s	$15	160	Co. Med. Socs.
2 centers	St. Bd. of Health, St. Med. Soc.	Asst. St. Health Officer	Obstetrics, Pediatrics	1 day	Varies	Lectures, Symposiums	Public buildings	Out of state	M.D.'s	No	...	.....
Ohio											
10 centers	St. Med. Assn.	Chairman, Comm. on Education	General	3 sessions monthly	Fall	Lectures	Public buildings	Med. sch. and in state	Co. Med. Soc. members	No	1,184	None
Oklahoma											
36 centers (7 circuits)	St. Med. Assn.	Field Dir., Comm. on P. G. Study	Pediatrics	1 session weekly, 10 times	Throughout year	Lectures, Clinics, Demonstrations, Round Table Discussions	Hospitals, public buildings	Med. sch., out of state	M.D.'s	$6	655	U. S. Children's Bureau, Commonwealth Fund
Oregon											
10 centers	St. Bd. of Health, St. Med. Soc.	Director, Div. Mat. and Child Health	Obstetrics, Pediatrics	1 to 2 days	June	Lectures	Public buildings	Med. sch., out of state	M.D.'s	No	...	.....
Rhode Island											
Statewide	St. Health Dept.	Chief, Div. of Mat. and Child Health	Pediatrics	1 session	Throughout year	Lectures, Demonstrations, Round Table Discussions	Hospitals, public buildings	Out of state	Co. Med. Soc. members	No	...	St. Med. Soc.
Tennessee											
45 centers (9 circuits)	St. Med. Assn.	Chairman, Comm. on P. G. Instr., Int. Med.	Pediatrics (1940), Medicine (1941)	1 day weekly, 10 times	Two year courses	Lectures, Clinics, Demonstrations, Round Table Discussions, Consultation Service	Hospitals, public buildings	Out of state	M.D.'s	$2.50 to $10	1,180 (pediatrics)	St. Health Dept., U. of Tenn. and Vanderbilt U. Med. Schs., Commonwealth Fund
Virginia											
5 centers	St. Med. Soc., Univ. of Va. Ext. Div.	Exec. Secretary Dept. of Clin. and Med. Educ.	General and Special	1 day weekly, 10 times	Throughout year	Lectures, Clinics, Symposiums, Demonstrations, Round Table Discussions	Medical Schools, hospitals, public buildings	Med. sch., in state and out of state	M.D.'s	$5	320	U. of Virginia Dept. of Med., Med. Coll. of Virginia
Washington											
8 centers	St. Dept. of Health, St. Med. Assn.	Director, Div. Mat. and Child Hygiene	Obstetrics	1 to 3 days	Summer	Lectures, Round Table Discussions	Public lecture rooms	Med. sch., out of state	M.D.'s and guests	No	86	U. S. Children's Bureau
West Virginia											
10 centers	St. Med. Assn. and St. Health Dept.	Exec. Secretary	Pediatrics, Obstetrics, Syphilis	1 day weekly, 5 times	Summer	Lectures, Clinics, Symposiums, Round Table Discussions	Public buildings	Out of state med. sch. and in state	M.D.'s, nurses technicians	No	576	U. S. Children's Bureau
Wisconsin											
5 centers	St. Med. Soc.	Council on Scientific Work	General	1 day	Spring	Lectures, Clinics, Demonstrations, Round Table Discussions	Public buildings	Med. sch., in state and out of state	Co. Med. Soc. members	$5	435	St. Bd. of Health

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which offer courses leading to restricted practice in a specialty have greater responsibilities than formerly, and these have been outlined in the newly adopted set of principles.

This year, for the first time, the Council is gathering data on proposed courses, and it is contemplated that publication of this information will be made at periodic intervals for ready reference in THE JOURNAL. The institutions conducting graduate programs and their location, the date when instruction begins, the length and content of the courses, the type of instruction offered, the number of physicians accepted for each course and their eligibility, the instructors participating and the fees required will be included. Courses restricted to intramural postgraduate education in obstetrics and pediatrics designed for practicing physicians recently were summarized briefly, such courses being financed in whole or in part from social security funds.[7]

RECENT DEVELOPMENTS IN STATE AND LOCAL PROGRAMS

The Associated State Postgraduate Committees held their fifth annual meeting at Cleveland on June 4, 1941. It was the suggestion of Dr. Henry H. Turner of Oklahoma that a national registry of postgraduate assemblies and a registry for postgraduate instructors be established. A committee is to be appointed to study the proposal and to present a resolution on this subject at the next annual meeting of the House of Delegates.

The University of California Medical School, San Francisco, now serves as a center for postgraduate education in pediatrics and obstetrics for the states of California, Nevada, Utah, Idaho, New Mexico and Arizona. Funds are supplied from participating states, the Rosenberg Foundation and the Children's Bureau of the U. S. Department of Labor.

During January 1941 a three day refresher course in the clinical aspects of dermatology was given for practicing physicians at the University of California Medical School, San Francisco. A fee of $20 was charged. During June 1941 a week of instruction in general medicine, including the fields of heart disease, diseases of the blood, gastroenterology and endocrinology, and a one week course in general surgery, including traumatic surgery, fractures, treatment of infections and hand injuries, was given. Each program was designed for practicing physicians.

From January to April 1941 the Committee on Clinical Congress of the Connecticut State Medical Society organized two courses of fourteen lectures each given at weekly intervals in the Yale University School of Medicine on diseases of nutrition and on industrial medicine. A registration fee of $3 was charged for each course.

In Georgia, postgraduate courses conducted by the state medical association were inaugurated during the past year. One week courses in general medicine and surgery were given at Waycross and at Albany. These seminars were financed by an appropriation of the medical association. In the future a small registration fee will be charged.

A five weeks postgraduate course in obstetrics was offered during 1940-1941 to practicing physicians by the University of Chicago and the Chicago Lying-in Hospital in cooperation with the Illinois State Department of Health and the Children's Bureau of the United States Department of Labor. The number of registrants was limited to five for each course. A registration fee of $15 was charged.

The medical school of the State University of Iowa, Iowa City, established a one week course in obstetrics during 1940-1941. Only three physicians were accepted each week; no registration fee was charged. The Division of Maternal and Child Health of the State Department of Health cooperated.

The Department of Graduate Medicine, School of Medicine, Tulane University of Louisiana, New Orleans, offered a course in tropical medicine and medical parasitology to physicians during 1940-1941. Instruction in the etiology, epidemiology, pathology, symptomatology, diagnosis, treatment and control of diseases of warm climates was included during four and one-half months. Physicians from Latin America were enrolled as well as those from other countries. A registration fee of $300 was charged and clinical pathologic equipment was provided by each registrant.

The chairman of the committee on graduate education, Dr. F. T. Hill of the Maine Medical Association, has reported that, while only 10 per cent of physicians continue their education independently, 73 per cent attend hospital staff meetings regularly. This fact suggests the more efficient use of hospital facilities in any program of postgraduate study. Staff meetings with case studies as a basis of the program with a clinical pathologic presentation, panel discussions and the participation of guest speakers have proved especially effective in Maine.

The Massachusetts Medical Society in cooperation with the state department of health and the U. S. Public Health Service planned to provide a medical library extension service in connection with the state society's program of postgraduate education. The Boston Medical Library was charged with the operation and with the establishment of the loan service. Funds were provided by the U. S. Public Health Service.

The Medical Association of Montana has joined the four other state societies of Colorado, New Mexico, Utah and Wyoming in the Rocky Mountain Medical Conference. The 1941 conference is scheduled to be held in the Yellowstone National Park, September 2 to 4.

At the Continuation School of Medicine, Detroit, under the joint auspices of the Wayne County Medical Society and the Wayne University College of Medicine a course in industrial medicine and surgery was given for the first time during 1940-1941. Fifty-three enrolled for the lectures, illustrated by lantern slides and movies.

The Committee on Post-Graduate Education of the Medical Society of New Jersey has affiliated with the New York University College of Medicine for the purpose of organizing clinical teaching in the Newark City Hospital. Six to nine weeks refresher courses with two or three hour sessions each week for groups of from four to twenty physicians were planned to permit close supervision and instruction and have been conducted during 1940-1941. Subjects included were peripheral vascular diseases, fractures, diseases of the liver and biliary tract, amputations and tuberculosis. Teaching at the bedside was emphasized. Tuition of $20 or $25 was charged.

The New York University College of Medicine has organized similar courses for the practicing physicians of Queens County, N. Y. Subjects included for this group were diagnostic roentgenology, internal medicine,

7. Daily, E. F.: Intramural Postgraduate Education in Obstetrics and Pediatrics, J. A. M. A. 115:1436 (Oct. 26) 1940.

varicose veins and dermatology. Courses were given in the clinics and wards of the Queens General Hospital, each consisting of a two hour session weekly for five to ten weeks. Case teaching methods were employed, and in the course in internal medicine each registrant had the opportunity to demonstrate the various methods of diagnosis. Fees varied from $25 to $50; from six to ten students were accepted for each course.

At Duke University School of Medicine, Durham, N. C., a course in obstetrics and pediatrics was organized during 1940-1941. Registration was limited to four physicians practicing in the state. A $15 fee was charged, which was returned on completion of the course. The maternal and child health service division of the state board of health cooperated in providing meals and lodging for registrants. Instruction was of an informal, clinical and practical nature.

The Northwest Texas Medical Association held its first postgraduate assembly at Marshall, Texas, on Dec. 5, 1940. The program was presented by members of the staff of Baylor University College of Medicine. There were ten hours of lectures and round table discussions. A $1 registration fee was charged.

A speakers' bureau has been established by the Postgraduate Medical Education Committee of the Washington State Medical Association. Eighty-eight Washington physicians comprise the bureau. Subjects included those sponsored by the state department of health. In addition, a plan has been devised for groups of five out of state speakers to give lectures and clinics in obstetrics and gynecology, pediatrics, surgery, medicine, traumatic surgery and fractures. These lectures, designed primarily for practicing physicians, are to be given in a central location in five districts of the state, with one afternoon and evening meeting at local hospitals for five consecutive weeks.

RECENT DEVELOPMENTS IN NATIONAL PROGRAMS

Under the joint auspices of the Pan American Sanitary Bureau and the United States Public Health Service twenty-one fellowships have been awarded to young medical graduates of thirteen countries of South and Central America during 1940-1941. They were distributed as follows: Argentina two, Bolivia one, Brazil two, Colombia three, Chile one, Costa Rica one, Cuba one, Ecuador four, Guatemala two, Haiti one, Honduras two, Mexico one and Peru one. These fellows were assigned to teaching or research institutions in New York, Massachusetts, Maryland, Michigan, Pennsylvania, Illinois, Missouri, Virginia, Louisiana and the District of Columbia.

The number of creditable applications for intern training and graduate study from physicians of Latin America is increasing. For this reason additional funds have been provided by the coordinator of commercial and cultural relations among the American republics for financing additional fellowships for the year 1941-1942. At least thirty-five additional fellows are to be selected and placed during the coming year.

The American Foundation for Tropical Medicine, Inc., has established a limited number of fellowships for postgraduate study in tropical medicine at Tulane University of Louisiana School of Medicine, New Orleans. These fellowships are available to qualified physicians of Central and South America and Mexico. Tuition fees are paid by the foundation as well as travel and maintenance not to exceed $700. The United States Department of State, Washington, D. C., aids in publicizing this graduate study, which is confined largely to the diagnosis and management of diseases of warm climates.

From July 1940 to June 1941 one thousand, one hundred and seventy-five applications for instruction in public health were received by state health departments. Approximately 28 per cent of the applicants were physicians. The United States Public Health Service approved such applications as well as budgets of state health departments and of schools which offered postgraduate public health training.

Three types of training were provided: academic study, college or university accredited field training and nonaccredited field practice, which included supervised experience in clinics and hospitals. The first and third types were each selected by about half of the applicants. The duration of training varied from less than one month to twelve months.

Applications were received from physicians of thirty-eight states and Puerto Rico. Johns Hopkins University, Vanderbilt University, Harvard University, University of Michigan, University of North Carolina, University of Minnesota and Columbia University received the greatest number of graduate students in public health under this program, while ten physicians applied to other institutions.

The United States Army Medical School, Washington, D. C., provided during 1940-1941 a condensed basic graduate course of one month's duration for medical officers. Professional specialists' courses of varying duration were continued during 1940 and until March 1, 1941, when they were discontinued except for informal training. After approximately six months' duty, Reserve and National Guard Medical Department officers may be afforded an opportunity to attend a one month refresher course at the Medical Field Service School or at certain general hospitals. A course in tropical medicine for medical officers has been authorized. This instruction will be given over four weeks and will be repeated each month. It is contemplated that the first class will begin about Aug. 1, 1941. Enrolment will be limited to approximately thirty men.

During 1940-1941 the Bureau of Medicine and Surgery, Navy Department, Washington, D. C., provided six weeks of instruction for thirty-one assistant surgeons of the United States Navy. The general subject was military medicine, with special instruction in the medical aspects of air raid precautions, atmospheric hygiene, aviation medicine, chemical warfare and damage control, as well as neuropsychiatry and other subjects commonly included in the study of medicine. Beginning in August 1941 a class of fifty medical officers of the Navy will assemble at the Naval Medical School, Naval Medical Center, Washington, D. C., for a similar course of instruction.

The United States Department of Labor, Children's Bureau, Washington, D. C., continues to provide funds for the postgraduate education of practicing physicians. Thirty-six states were aided and more than two hundred communities were affected. Registration for extramural refresher courses exceeded six thousand physicians, and for intramural courses given in medical schools more than five hundred physicians registered.

The American College of Physicians offered, for the fourth year, ten courses in special subjects for members of the college and for physicians preparing for certification by the American Board of Internal Medicine. For the first time instruction was given during the

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TABLE 1.—CONTINUATION COURSES FOR PRACTICING PHYSICIANS, 1940-1941

B. Where There Are Ample Facilities for Clinical Instruction—Five or More Days

Location of Course	Sponsoring Agencies	Director of Program	Subjects	Duration of Course	Time Given	Type of Instruction	Facilities for Graduate Programs	Instructors	Eligible for Admission	Registration Fee and/or Tuition	Approximate No. of M.D.'s Attending	Additional Contributing Agencies and Funds
Alabama												
Tuskegee Institute	John A. Andrew Clin. Soc.	Secretary-Treasurer	General and Special	1 week	April	Lectures, Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Hospital, outpatient clinics	Med. sch., in state and out of state	Negro M.D.'s	$5	158	John A. Andrew Mem'l Hosp.
Nashville, Tenn.	Vanderbilt U. Sch. of Med., Commonwealth Fund	Asst. Prof. of Medicine	Medicine, Pediatrics, Obstetrics, Gynecology	1 month	Summer	Lectures and Clinics	Medical School, hospital outpatient department	Med. sch.	M.D.'s	$55	19	.....
Arizona												
San Francisco, Calif.	St. Bd. of Health, Univ. of California Med. Sch.	Assoc. Prof. of Pediatrics, Univ. of California	Obstetrics and Pediatrics	1 and 2 weeks	Summer, Dec. and Jan.	Lectures, Clinics, Demonstrations	Medical School, hospital, outpatient department	Med. sch.	M.D.'s	No	14	U. S. Children's Bureau, St. Med. Assn.
California												
Los Angeles	College of Med. Evangelists	Chairman, Comm. on P. G. Educ.	General and Special	6 to 12 weeks	Twice yearly	Lectures, Symposiums, Demonstrations, Round Table Discussions	Medical School, outpatient dept. laboratories	Med. sch.	M.D.'s	$5-$100	51	Alumni Assn.
Pasadena	Huntington Mem'l Hosp.	Chairman, Program Comm.	Preclinical and Clinical	1 to 2 weeks	October	Lectures, Demonstrations, Clin. Path. Confs.	Hospital	Med. sch., in state and out of state	M.D.'s	$10-$25	70	S. P. Black Mem'l Lecture Assn.
San Francisco	Stanford U. Sch. of Med., San Francisco Dept. of Public Health	Dean	General and Special	1 week	September	Lectures, Demonstrations, Ward Rounds, Clinics, Lab. Experience	Medical School, hospital	Med. sch.	M.D.'s	$25-$35	184	.....
	U. of Calif. Med. Sch., St. Dept. of Public Health	Assoc. Prof. of Pediatrics	Obstetrics, Pediatrics	1 and 2 weeks	Summer, Dec. and Jan.	Lectures, Clinics, Demonstrations	Medical School, hospital, outpatient department	Med. sch.	M.D.'s	No	55	U. S. Children's Bureau, Rosenberg Foundation, St. Med. Assn.
	U. of Calif. Med. Sch.	Assoc. Prof. of Medicine	Medicine, Surgery, Orthopedics, Obstetrics, Gynecology, Dermatology	5 days to 2 weeks	January, June	Lectures, Clinics, Symposiums, Round Table Discussions, Clin. Path. Confs., Operative Demonstrations	Medical School, hospital, outpatient department, laboratories	Med. sch.	M.D.'s	$25-$50	112	.....
Colorado												
Denver	St. Med. Soc., Univ. of Colorado Sch. of Med.	Comm., Medical Educ. and Hospitals	General, Cardiology, Fractures	5 days	February	Lectures, Clinics, Symposiums, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Medical School, hospitals, outpatient departments	Med. sch. and in state and out of state	M.D.'s	$8	439	.....
Connecticut												
New Haven	St. Med. Soc., Yale U. Sch. of Med.	Chairman, Clinical Congress	Industrial Med., Nutrition	Once a week for 10 weeks	Spring	Lectures, Symposiums	Medical School	Med. sch., in state and out of state	M.D.'s	$3-$6	100	None
District of Columbia												
Washington	George Washington U. Sch. of Med.	Professor of Ophthalmology	Orthoptics, Ophthalmology, Aviation Medicine	3 courses, 1 week each	February and April	Lectures, Clinics, Symposiums, Clin. Path. Confs., Opthalmic animal surgery	Medical School, hospital, laboratory	Med. sch., out of state, med. officers of Army, Navy & Civil Aeronautics Authority	M.D.'s	$25-$100	747	.....
	Howard U. Sch. of Med.	Director, P. G. Course in V. D. Control	Venereal Disease Control	3 months	Fall, Winter and Spring	Lectures, Clinics, Round Table Discussions	Medical School, outpatient department	Med. sch.	M.D.'s	$20[1]	14	U. S. P. H. S.
Florida												
Jacksonville	St. Med. Assn., St. Bd. of Health	Chairman, P. G. Course Comm. (Joint comm.)	General and Special	1 week	June	Lectures, Clinics	Hospital, hotel	Med. sch. out of state	M.D.'s	$5	150	None

Georgia												
Albany and Waycross	Med. Assn. of Georgia	Chairman, Comm. on P. G. Med. Educ.	General Medicine and Surgery	1 week	April	Lectures, Symposiums, Demonstrations, Bedside Clinics	Hospitals	Med. sch., in state and out of state	M.D.'s	No	38	None
Augusta	Dept. of Public Health, U. of Georgia Sch. of Med.	Director of Prev. Diseases	Venereal Diseases	2 weeks	Winter	Lectures, Clinics, Demonstrations, Round Table Disc.	Medical School, hospitals, out-patient department, laboratories	Med. sch.	M.D.'s	No[1]	43	U. S. P. H. S.
	U. of Georgia Sch. of Med.	Dean	General Medicine and Surgery	2 weeks	June	Lectures, Clinics, Demonstrations, Ward Rounds, Assignment of Patients, etc.	Medical School, hospital, out-patient department	Med. sch. and in state	Negro M.D.'s	No	35	.....
			Endocrinology	1 week	June	Lectures, Clinics, Demonstrations, Symposiums	Medical School	Med. sch.	M.D.'s	$25	22	.....
Illinois												
Chicago	Children's Mem'l Hosp.	Chief of Staff	Pediatrics and Specialties	1 month	October	Lectures, Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Hospital, out-patient department, laboratory	Med. sch., hospital staff	M D.'s	$100	11	None
	Michael Reese Hosp.	Director, Cardiovascular Research	Rorschach Method of Psychological Interpretation, Electrocardiography	5 days and 2 weeks	June, August	Lectures, Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Hospital, out-patient department, laboratory	Med. sch. and in state	M.D.'s, psychologists with clinical experience	$35 and $100	26	None
	Northwestern U. Med. Sch.	Asst. to Dean	Urology, Endocrinology, Cardiorenal vascular disease	1 week to 1 month	September	Lectures, Demonstrations, Clinics, Ward Rounds	Medical School, hospital	Med. sch.	M.D.'s	$50	31	.....
	St. Dept. of Public Health, U. of Illinois Coll. of Med., St. Med. Soc.	Chairman, Advisory Comm. on Mat. and Child Health	Obstetrics, Pediatrics	1 and 2 weeks	Throughout year	Lectures, Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Medical Schools, hospitals, out-patient departments	Med. sch.	M.D.'s in Ill. (excl. Chicago)	$10[1]	34	.....
	U. of Chicago Sch. of Med.	Dean of Students	Gastroscopy	2 weeks, 3 months	Throughout year	Didactic and Clinical	Medical School, hospital, out-patient department	Med. sch.	M.D.'s	$100-$150	25	.....
	U. of Chicago Sch. of Med., Chicago Lying-In Hosp.	Prof. of Obstetrics and Gynecology	Obstetrics	4 to 6 weeks	Throughout year	Lectures, Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Hospital, out-patient department, laboratories	Med. sch.	M.D.'s	$25	70	U. S. Children's Bureau, St. Dept. of P. H.
	U. of Illinois Coll. of Med.	Dean	Anatomy, Oto-laryngology, Ophthalmology	1 week to 8 months	Throughout year	Lectures, Clinics	Medical College, hospital, out-patient department	Med. sch.	M.D.'s	$10-$100	46	.....
Indiana												
Indianapolis	Indiana U. Sch. of Med.	Chairman, Dept. of P. G. Educ.	Cardiology, Oto-laryngology	1 and 2 weeks	Spring	Lectures, Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Medical School, hospitals, out-patient departments	Med. sch., in state and out of state	M.D.'s	$50-$150	38	.....
			General Medicine and Surgery	1 week	Spring	Lectures, Clinics, Symposiums, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Medical School, hospitals, out-patient departments	Med. sch., in state and out of state	M.D.'s and medical students	No	300	Federal funds
	St. Bd. of Health, Indiana U. Sch. of Med., St. Med. Assn.	Chief, Bureau Mat. and Child Health, St. Bd. of Health	Obstetrics	2 weeks	Throughout year	Lectures, Clinics, Symposiums, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Medical School, hospitals, out-patient departments	Med. sch., in state and out of state	M.D.'s	$10 [1]	15	U. S. Children's Bureau
Iowa												
Iowa City	St. Univ. of Iowa, St. Dept. of Health	Assoc. in Obstetrics and Gynecology	Obstetrics	6 days	Throughout year	Clinics, Demonstrations, Round Table Discussions, Ward Walks, Delivery Room Observation	Hospital	Med. sch.	M.D.'s	No	40	.....

TABLE 1.—CONTINUATION COURSES FOR PRACTICING PHYSICIANS, 1940-1941—Continued

B. Where There Are Ample Facilities for Clinical Instruction—Five or More Days

Location of Course	Sponsoring Agencies	Director of Program	Subjects	Duration of Course	Time Given	Type of Instruction	Facilities for Graduate Programs	Instructors	Eligible for Admission	Registration Fee and/or Tuition	Approximate No. of M.D.'s Attending	Additional Contributing Agencies and Funds
Kansas												
Emporia	St. Med. Soc.	Chairman, Comm. on Study of Heart Disease	Heart Disease	5 days	October	Lectures, Clinics, Round Table Discussions	Hospitals	Med. sch., out of state	M.D.'s	$15	30	St. Bd. of Health
Kentucky												
Lexington	U. of Kentucky, St. Dept. of Health	Head, Dept. of Hyg. and Public Health	Public Health	12 weeks	Summer	Lectures, Demonstrations, Round Table Discussions, Field Work	Univ., outpatient department, laboratory	Med. sch., in state and out of state	M.D.'s, nurses, sanitarians	$100	24	U. S. P. H. S.
Louisville	St. Med. Assn., U. of Louisville Sch. of Med.	State Pediatric Consultant	Pediatrics	1 day a week, 10 weeks	Spring	Lectures, Clinics, Demonstrations, Round Table Discussions	Children's Hospital	Med. sch.	M.D.'s	$5	22	None
Louisiana												
New Orleans	Flint-Goodridge Hosp. of Dillard U.	Superintendent	General and Special	2 weeks	June	Lectures, Clinics, Demonstrations	Hospital	Med. sch., in state and out of state	Negro M.D.'s	$5	36	.....
	St. Dept. of Health, La. St. U. Med. Center	Supervisor, Mat. and Ch. Health	Obstetrics	2 weeks	Throughout year	Lectures, Clinics, Demonstrations, Round Table Discussions, Case Teaching	Medical Schools, hospitals, outpatient departments	Med. sch.	M.D.'s	No	15	U. S. Children's Bureau
	Tulane U. of La. Sch. of Med., Dept. of Grad. Med.	Director	General (intensive instruction)	1 week	October	Lectures, Clinics, Symposiums, Clin. Path. Confs.	Medical School	Med. sch.	M.D.'s	$5	64	.....
			Medicine and Specialties, Surgery and Specialties, Obstetrics, Gynecology	4 weeks	Winter	Lectures, Clinics, Demonstrations, Clin. Path. Confs., Bedside Instruction	Medical School, hospital, outpatient department, laboratories	Med. sch.	Licensed physicians	$100-$200	71	Commonwealth Fund
			Tropical Medicine, Parasitology	4½ months	Fall	Lectures, Clinics, Demonstrations, Laboratory Procedure	Medical School	Med. sch. and out of state	M.D.'s	$300	5	Amer. Foundation for Tropical Medicine, Inc.
Maine												
Boston, Mass.	Bingham Associates Fund, St. Med. Assn.	Director	General and Special	2 weeks to 1 month	Throughout year	Lectures, Clinics, Symposiums, Clin. Path. Confs.	New Eng. Med. Center, hospitals, medical school	Med. sch.	Co. Med. Soc. members	No	...	Tufts College Med. Sch.
	Commonwealth Fund, St. Med. Assn.	Director, Div. of P. H.	Medicine, Obstetrics, Pediatrics, Office Surgery	1 month	Varies	Lectures, Clinics, Bedside Teaching	Medical School, hospital, outpatient department	Med. sch.	Co. Med. Soc. members	No [1]	...	Harvard Med. Sch.
Maryland												
Baltimore	Johns Hopkins U. Sch. of Med.	Dean	General and Special	6 months to 1 year	Per arrangement	Clinical, Laboratory	Medical School, outpatient department	Med. sch.	M.D.'s (acceptable to department heads)	$150-$300	14	None
Massachusetts												
Boston	American College of Physicians	Committee, P. G. Course No. 4	General Medicine	3 weeks	April	Lectures, Clinics, Demonstrations, Ward Rounds, Clin. Path. Confs.	Medical School, hospitals	Med. sch., in state	M.D.'s [2]	$60	55	Harvard Med. Sch.
		Director, P. G. Course No. 5	Allergy	1½ weeks	April	Lectures, Clinics, Laboratory Procedure, Discussions, Clin. Path. Confs.	Hospital, outpatient department, laboratories	Med. sch.	M.D.'s [2]	$30	6	Mass. Gen. Hospital
		Director, P. G. Course No. 6	Gastroenterology	1 week	April	Lectures, Clinics, Demonstrations, Conferences	Medical School, hospitals	Med. sch.	M.D.'s [2]	$20	49	Boston U. Sch. of Medicine
	Boston Univ. Sch. of Med.	Dean	Electrocardiology, Roentgenology	12 exercises	Varies	Lectures, Demonstrations, Round Table Discussions	Hospitals, outpatient departments	Med. sch.	M.D.'s	$50-$75	8	None
	Harvard Med. Sch., Courses for Grad.	Assistant Dean	Preclinical, General and Special	Varies	Throughout year	Lectures, Clinics, Demonstrations, Clin. Path. Confs.	Medical School, hospital, outpatient department, laboratories	Med. sch.	M.D.'s	$15-$600	600	Commonwealth Fund

	Tufts Coll. Med. Sch.	Chairman, P. G. Division	General and Special	1 to 4 weeks	Throughout year	Lectures, Clinics, Round Table Discussions	Hospitals, outpatient departments, laboratories	Med. sch.	M.D.'s	$25-$200	115	Bingham Associates Fund
Cambridge	Mass. Institute of Technology	Dean of Science	Public Health	7½ weeks	Summer	Lectures, Demonstrations, Round Table Discussions, Field Trips	Health department	Staff members	M.D.'s, engineers, etc.	$125	6	None
Michigan												
Ann Arbor	American Coll. of Physicians	Director, P. G. Course No. 7	General Medicine	2 weeks	April	Clinics, Demonstrations, Conferences	Medical School, hospital	Med. sch.	M.D.'s [2]	$40	25	Univ. of Mich. Med. Sch.
	U. of Mich. Med. Sch., St. Med. Soc.	Chairman, Dept. P. G. Med.	Preclinical, General and Special	1 to 8 weeks	Throughout year	Lectures, Clinics, Symposiums, Demonstrations, Clin. Path. Confs.	Medical School, hospital, outpatient department, laboratories	Med. sch., in state and out of state	M.D.'s	$5-$50	772	St. Dept. of Health, Wayne U. Coll. of Med., Rackham Fund, Kellogg Foundation
	St. Dept. of Health, U. of Mich. Med. Sch., St. Med. Soc.	Director, Bureau of Mat. and Child Health	Obstetrics	2 weeks	Fall	Lectures, Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Medical School, hospital	Med. sch. and in state	M.D.'s	No	15	.....
Detroit	Wayne Co. Med. Soc., Wayne U. Coll. of Med.	Chairman, Advisory Council	General Medicine Specialties, Industrial Medicine and Surgery, Anatomy	1 day weekly, 1 semester	Throughout year	Lectures, Clinics, Laboratory Demonstrations, Bedside Teaching	Medical College, hospitals, outpatient departments	Med. sch. and in state	Co. Med. Soc. members	$5-$60	236	None
Minnesota												
Minneapolis	U. of Minn. Med. Sch., Center for Continuation Study	Director, Dept. P. G. Educ.	General and Special	6 days	Throughout year	Lectures, Clinics, Symposiums, Demonstrations, Round Table Discussions, Clin. Path. Confs., Movies	Medical Center and affiliated hospitals	Med. sch., in state and out of state	Licensed Minn. M.D.'s; out of state Co. Med. Soc. members	$2-$25	229	St. Dept. of Health, St. Med. Assn., Commonwealth Fund, Federal funds
Rochester	American Coll. of Physicians	Director, P. G. Course No. 3	Gastro-Intestinal Diseases	2 weeks	February	Lectures, Clinics, Conferences, Demonstrations, Case Presentation	Mayo Clinic, hospitals	Clinic Staff	M.D.'s [2]	$40	35	The Mayo Foundation
Mississippi												
Sanatorium	Miss. St. T. B. Sanatorium	Superintendent	Diseases of the Chest	2 weeks or more	Summer	Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs., X-Ray Confs., Bedside Teaching	Hospital, outpatient department, laboratory	Resident hospital staff	M.D.'s	No[1]	3	St. Bd. of Health
Missouri												
St. Louis	Washington U. Sch. of Med.	Dean	Obstetrics, Gynecology, Otolaryngology, Ophthalmology, Neuropsychiatry	1 month, 8 months	June, October to May	Didactic and Clinical	Medical School, hospitals, laboratories	Med. sch.	M.D.'s	$20-$800	54	None
Out of state centers	St. Bd. of Health	Director, Div. of Local Health Admin.	Public Health, Venereal Diseases	1 to 9 months	Throughout year	Didactic and Clinical	P. H. Schools, laboratories	Med. sch., clinic staff	M.D.'s	No	6	U. S. P. H. S.
Nebraska												
Omaha	U. of Nebraska Coll. of Med., St. Med. Assn., St. Dept. of Health	Dean	Obstetrics, Pediatrics	2 weeks	Throughout year	Lectures, Clinics, Demonstrations, Round Table Discussions	Medical School, hospitals, outpatient department, laboratories	Med. sch.	M.D.'s	No	6	Federal funds
Nevada												
San Francisco, Calif.	St. Dept. of Health, U. of California Med. Sch.	Assoc. Prof. of Pediatrics, U. of Calif.	Obstetrics, Pediatrics	1 and 2 weeks	Summer, Dec. and Jan.	Lectures, Clinics, Demonstrations	Medical School, hospitals, outpatient department	Med. sch.	M.D.'s	No	6	U. S. Children's Bureau
New Jersey												
Jersey City	Margaret Hague Maternity Hosp., Columbia Univ.	Medical Director	Obstetrics	1 or 3 months	Throughout year	Lectures, Clinics, Symposiums, Demonstrations, Round Table Discussions, Clin. Path. Confs., Antepartum and Postpartum Clinics	Hospital, outpatient department, laboratories	Med. sch., hospital staff	M.D.'s	$100-$350[3]	26	N. Y. Dept. of Health
Newark	Newark City Hosp., Essex Co. Med. Soc., New York U. Sch. of Med.	Chairman, P. G. Comm.	Medicine, Surgery, Orthopedics, Peripheral Vascular Disease	Once a week, 6 to 9 weeks	Varies	Lectures, Clinics, Demonstrations	Hospital, laboratories, public buildings	Med. sch., hospital staff	M.D.'s	$15-$25	75	St. Med. Soc.

TABLE 1.—CONTINUATION COURSES FOR PRACTICING PHYSICIANS, 1940-1941—Continued

B. Where There Are Ample Facilities for Clinical Instruction—Five or More Days

Location of Course	Sponsoring Agencies	Director of Program	Subjects	Duration of Course	Time Given	Type of Instruction	Facilities for Graduate Programs	Instructors	Eligible for Admission	Registration Fee and/or Tuition	Approximate No. of M.D.'s Attending	Additional Contributing Agencies and Funds
New Mexico												
San Francisco, Calif.	St. Dept. of Public Health, U. of California Med. Sch.	Assoc. Prof. of Pediatrics, Us of Calif.	Obstetrics, Pediatrics	1 and 2 weeks	Summer, Dec. and Jan.	Lectures, Clinics, Demonstrations	Medical School, hospital, outpatient department	Med. sch.	M.D.'s	No	9	.....
New York												
Brooklyn	Med. Soc. Co. of Kings, Long Island Coll. of Med.	Chairman, Joint Comm. on P. G. Educ.	General	1 to 3 times weekly, 1 to 3 months	Fall, Winter and Spring	Lectures, Clinics, Demonstrations, Symposiums, Round Table Discussions, Confs.	Medical School, hospitals, outpatient departments, Co. Soc. Bldg.	Med. sch. and in state	M.D.'s	$10-$25 up	292	None
Buffalo	U. of Buffalo Sch. of Med.	Chairman, Dept. of P. G. Work	General	2 weeks	September	Lectures, Clinics, Demonstrations, Round Table Discussions, Bedside Instruction	Medical School, hospitals, outpatient department, laboratories	Med. sch.	M.D.'s	$50	60	None
New York	American Coll. of Physicians	Director, P. G. Course No. 2	Allergy	2 weeks	February	Clinical and Laboratory Work, Conferences, Demonstrations	Hospital	Med. sch., hospital staff	M.D.'s [2]	$40	8 (limited)	Roosevelt Hospital
	City of New York Dept. of Health	Director, Bureau of Social Hygiene	Venereal Diseases	1 to 2 months (full time)	Varies	Lectures, Clinics, Symposiums, Demonstrations, Round Table Discussions	City Health Dept., outpatient departments	Staff members, outside authorities	Licensed physicians	No	100	Federal funds
	Columbia U. Coll. of Phys. & Surgs. and New York P. G. Med. Sch.	Dean	Preclinical, General and Special	1 week to 3 months	Throughout year	Lectures, Clinics, Demonstrations, Clin. Path. Confs., Ward Rounds, Movies	Medical School, hospitals, outpatient departments, laboratories	Med. sch., in state	M.D.'s	$15-$400	988	.....
	New York Academy of Med.	Chairman, Comm. on Graduate Fortnight	Infections	2 weeks	October	Lectures, Clinics, Demonstrations, Round Table Discussions. Scientific Exhibit	Hospitals, Academy Bldg.	Med. sch., in state and out of state	M.D.'s	$5	700	.....
	New York Eye & Ear Infirmary Sch. of Ophth. & Otol.	Chairman	Ophthalmology, Otology, Rhinology, Laryngology, Bronchoscopy, Esophagoscopy	1 week	March	Lectures, Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs.	School of Oph., hospital, outpatient department	Med. sch. and in state	M.D.'s	$50	30	None
			General and Special Branches of Ophthalmology and Otolaryngology	1 to 3 months	Throughout year	Lectures, Clinics, Demonstrations, Clin. Path. Confs., Laboratory	Hospital, laboratory	Med. sch.	M.D.'s	$40-$110	138	None
	New York Med. Coll.	Acting Dean	Cardiology, Tuberculosis, Hematology, Endocrinology, Gastroscopy, Dog Surgery	Varies	Throughout year	Lectures, Clinics, Demonstrations, Conferences	Medical College	Med. coll.	M.D.'s	$50-$250	28	None
	New York Polyclinic Med. Sch. & Hosp.	Medical Executive Officer	Preclinical, General and Special	1 to 9 months	Throughout year	Didactic, Clinical and Laboratory	Medical School, hospital, outpatient department, laboratories	Med. sch.	M.D.'s (approved internship)	$75-$1,000	120	None
	New York Univ. Coll. of Med.	Assistant Dean	General and Special	1 week to 1 year	Throughout year	Lectures, Clinics, Discussions, Demonstrations, Conferences, Symposiums	Medical College, hospital, outpatient department, laboratories	Med. coll., in state and out of state	M.D.'s	$20-$200	126	None
	St. Dept. of Health	Director, Syphilis Control	Syphilology	1 week, 1 to 2 months	Throughout year	Didactic, Clinical	Medical College, hospitals, outpatient departments	Med. coll. and in state	M.D.'s	No	41	New York U. Coll. of Med., U. S. Public Health Service
Saranac Lake and New York City	Trudeau Sch. of T. B.	Director	Tuberculosis	6 weeks	September, October	Lectures, Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs.	School, hospitals, laboratories	Med. sch. and in state	M.D.'s	$100	29	Edw. L. Trudeau Foundation, Bellevue Hosp. N. Y. C., Lillie Babbitt Hyde Foundation

			Silicosis and Tuberculosis in Industry	1 week	Varies	Symposium, Lectures, Discussions	School, laboratory	Med. sch., in state and out of state	M.D.'s, ind. hygienists	$25	400	.....
North Carolina												
Chapel Hill	University of North Carolina Sch. of Public Health	Dean	Public Health	3 months	Fall	Lectures, Laboratory Courses, Practical Field Work	School of Public Health, health units	P. H. sch., in state	M.D.'s, public health workers	$100	14	U. S. P. H. S.
Durham	St. Bd. of Health, Univ. of North Carolina Sch. P. H., Duke Univ. Sch. Med.	Asst. St. Health Officer, Raleigh	Obstetrics, Pediatrics	5 days	Throughout year	Lectures, Clinics, Symposiums, Demonstrations, Round Table Discussions	Medical School, hospitals, outpatient department	Med. sch.	M.D.'s	No	114	U. S. Children's Bureau, Duke Hosp.
North Dakota												
Minneapolis, Minn. and Iowa City, Iowa	N. D. St. Dept. of Health, St. Univ. of Iowa, Univ. of Minnesota Center for Continuation Study	St. Health Officer, Bismarck, N. D.	Obstetrics, Pediatrics, Venereal Diseases	6 days	Varies	Lectures, Symposiums, Round Table Discussions	Medical School or Center for Continuation Study	Med. sch., out of state	M.D.'s	No[1]	64	Local medical societies, Federal funds
Ohio												
Cincinnati	Univ. of Cincinnati Coll. of Med.	Prof. of Otolaryngology	Otolaryngology	1 week	May	Lectures, Clinics, Demonstrations, Operative work on cadaver	Medical College, hospital	Med. coll.	Practicing otolaryngologists	$75	25	None
Columbus	Americal Coll. of Physicians	Director, P. G. Course No. 8	Clinical Medicine from the Hematologic Viewpoint	1 week	April	Lectures, Clinics, Informal and Clin. Path. Confs.,Demonstrations, Round Table and General Discussions, Personal Patient Studies	St. Univ., hospital, laboratories	Med. coll., in state	M.D.'s [2]	$20	25	Ohio St. U. Coll. of Med.
Oklahoma												
Oklahoma City	U. of Oklahoma Sch. of Med., St. Health Dept.	Associate Prof. of Obstetrics	Obstetrics, Gynecology	2 weeks	Throughout year	Lectures, Clinics, Demonstrations, Round Table Discussions, Ward Rounds, Home Deliveries	Medical School, hospital, outpatient department, laboratories	Med. sch.	M.D.'s	$25	18	Federal funds
Oregon												
Portland	Oregon Academy of Oph. and Otol., Univ. of Oregon Med. Sch.	Chairman, Comm. on Arrangements	Ophthalmology, Otolaryngology	1 week	April	Lectures, Clinics, Demonstrations, Round Table Discussions	Medical School, hospitals, outpatient departments, laboratories	Med. sch., in state, out of state	M.D.'s	$25	80	.....
Pennsylvania												
Philadelphia	American Coll. of Physicians	Director, P. G. Course No. 9	Cardiovascular Disease	2 weeks	April	Lectures, Clinics, Discussions, Demonstrations, Symposiums, Round Table Discussions, Ward Rounds	Hospitals	Med. sch., in state, out of state	M.D.'s [2]	$40	25	U. of Pennsylvania Med. Sch. and Grad. Sch. of Med.
	Pennsylvania Hospital	Chief, Medical Service "B"	Internal Medicine, Cardiology, Metabolism	1 to 3 weeks	June	Lectures, Clinics, Symposiums, Round Table Discussions, Demonstrations, Clin. Path. Confs. Ward Rounds	Hospitals, outpatient department	Med. sch., in state	M.D.'s	$35-$100	30	None
	Philadelphia Co. Med. Soc.	Director, P. G. Institute	Modern Therapy	5 days	April	Lectures	Hotel	Med. sch. and in state	M.D.'s (senior medical students)	$5 (no charge to Co. Med. Soc. members)	3,021	None
	Temple U. Sch. of Med.	Dean	Bronchoscopy, Esophagology	2 weeks	3 courses yearly	Clinical	Hospital, outpatient department	Med. sch.	M.D.'s	$250	30	None
	U. of Pennsylvania Grad. Sch. of Med.	Dean	General and Special	1 to 16 weeks	Throughout year	Clinical	Medical School, hospitals, outpatient department	Grad. med. sch.	M.D.'s	$60-$400	...	None
	Woman's Med. Coll. of Pennsylvania	Dean	Preclinical, Clinical	8 months	Throughout year	Clinics, Demonstrations, Clin. Path. Confs., Dissecting room privileges	Medical School, hospital, outpatient department, laboratories	Med. sch.	M.D.'s	$100-$300	2	None

TABLE 1.—CONTINUATION COURSES FOR PRACTICING PHYSICIANS, 1940-1941—Continued

B. Where There Are Ample Facilities for Clinical Instruction—Five or More Days

Location of Course	Sponsoring Agencies	Director of Program	Subjects	Duration of Course	Time Given	Type of Instruction	Facilities for Graduate Programs	Instructors	Eligible for Admission	Registration Fee and/or Tuition	Approximate No. of M.D.'s Attending	Additional Contributing Agencies and Funds
South Carolina												
Charleston	Med. Coll. of the St. of South Carolina	Dean	Obstetrics, Pediatrics	2 weeks	Throughout year	Ward Clinics, Symposiums, Clin. Path. Confs.	Medical College, hospital, outpatient department, laboratories	Med. sch.	M.D.'s	No	16	St. Bd. of Health, Federal funds
South Dakota												
Minneapolis, Minn.	S. D. St. Bd. of Health, U. of Minnesota Center for Continuation Study	Supt., St. Bd. of Health, Pierre	Obstetrics, Pediatrics, Venereal Disease	6 days	Varies	Lectures, Demonstrations, Clinics, Discussions	Center for Continuation Study	Med. sch., out of state	M.D.'s	No[1]	64	U. S. Children's Bureau, U. S. Public Health Service
Tennessee												
Nashville	Meharry Med. Coll.	Chairman, Comm. on P. G. Course	General Medicine, Surgery, Pediatrics, Obstetrics	2 weeks	June	Lectures, Clinics, Symposiums, Demonstrations, Round Table Discussions, Ward Rounds	Medical College, hospital, outpatient department, laboratories	Med. coll., in state	Negro M.D.'s	$20	10	None
	Vanderbilt U. Sch. of Med.	Director, P. G. Instruction	General and Special	Varies	Throughout year	Didactic and Clinical	Medical School, hospital, outpatient department	Med. sch.	M.D.'s	None to $100	...	None
Texas												
Dallas and Galveston	St. Med. Assn., St. Dept. of Health	Secretary, St. Med. Assn., Fort Worth	Obstetrics, Pediatrics	4 weeks	Spring	Lectures, Clinics, Symposiums, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Medical Schools, hospitals, outpatient departments	Med. sch.	M.D.'s	No[1]	40	U. of Texas Faculty of Med., Galveston, Baylor Univ. Coll. of Med., Dallas, Federal funds
Utah												
San Francisco, Calif.	St. Bd. of Health, Univ. of California Med. Sch.	Assoc. Prof. of Pediatrics, U. of California	Obstetrics and Pediatrics	1 and 2 weeks	Summer, Dec. and Jan.	Lectures, Clinics, Demonstrations	Medical School, hospital, outpatient department	Med. sch.	M.D.'s	No	18	U. S. Children's Bureau, St. Med. Assn.
Vermont												
Burlington	U. of Vermont Coll. of Med., St. Med. Soc.	Dean	Ophthalmology	1 week	June	Lectures, Clinics, Symposiums, Round Table Discussions, Clin. Path. Confs.	Medical College, hospital, outpatient department	Med. coll.	M.D.'s	$50	16	None
Virginia												
Charlottesville	St. Med. Soc., U. of Virginia Dept. of Med.	Exec. Secretary, Dept. of Clin. and Med. Educ.	Medicine	1 week	June	Lectures, Clinics, Demonstrations, Round Table Discussions, Ward Rounds	Medical College, hospital, laboratories	Med. sch., in state and out of state	M.D.'s	$15	31	.....
Richmond	Med. Coll. of Virginia	Dean	General	2 weeks	June	Lectures, Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Medical College, hospital, outpatient department	Med. sch.	Negro M.D.'s	$5-$10	35	State of Virginia
Washington												
Portland, Ore.	Wash. St. Dept. of Health, Div. of Mat. and Child Hygiene, St. Med. Assn., U. of Oregon Med. Sch.	Chief, Div. of Mat. and Child Hygiene	Obstetrics, Pediatrics	5 days	January	Lectures, Clinics, Round Table Discussions	Medical School, hospital, outpatient department, laboratories	Med. sch., out of state	Co. Soc. Members	No	24	.....
Seattle	U. of Washington Ext. Div., King Co. Hosp. System, King Co. Med. Soc., St. Med. Assn.	Director, Univ. Health Center	Preclinical, General and Special	5 days	July	Lectures, Clinics, Symposiums, Round Table Discussions, Demonstrations, Clin. Path. Confs.	University laboratories, hospital, outpatient department	Med. sch., out of state	M.D.'s	$10	275	.....
Wisconsin												
Madison	U. of Wisconsin Med. Sch., St. Med. Soc.	Dean	General and Special	1 to 5 months	Varies	Demonstrations, Clin. Path. Confs., Round Table Discussions, Ward classes	Medical School, hospitals, laboratories	Med. sch.	M.D.'s	$100-$400	7	None

1. Maintenance or stipend offered physicians taking these courses.
2. Courses offered especially for Fellows of the College or for those preparing either to meet requirements for membership in the College or certification by the American Board of Internal Medicine.
3. Free to any member of state medical society recommended by Chairman of Maternal Welfare Committee.

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midwinter of 1940-1941. The committee on postgraduate courses of the college has outlined the following principles:

1. Intensive courses of two weeks' duration are most in demand.
2. Similar subjects should be given in alternate years at different institutions and localities.
3. Instruction should be organized at an appropriate level for the physicians registered.
4. The needs of the registrants should be known and the course planned accordingly.
5. Instructors should be fully qualified men of experience.

The American Academy of Ophthalmology and Otolaryngology has continued courses of instruction at the annual meetings of the academy. In August 1940 home study courses, through directed reading, in the fundamentals of ophthalmology and otolaryngology were started. These courses were intended primarily for residents in institutions which gave no formal instruction. In addition to this group, physicians preparing for certification and those practicing in smaller communities registered for the study course. A total of four hundred and sixty-five physicians subscribed, paying a fee of $10 each.

The course was conducted as follows: Each month reading assignments in standard textbooks were given which would require between one and one and a half hours' study daily. At the end of each month twenty questions covering the assignments of the preceding month were sent to each registrant, answered, and then returned to the committee of the academy. Different groups of ophthalmologists and otolaryngologists over the country corrected the answers and graded the examinations and returned them to the registrants. Subjects included in the course were anatomy, histology, embryology, physiology, bacteriology, pathology, and biochemistry of the eye, ear, nose and throat, refraction, perimetry, optics, biomicroscopy, and hearing and vestibular tests. This course will be repeated beginning Aug. 1, 1941.

CONTINUATION STUDY FOR PRACTICING PHYSICIANS, 1940-1941

Opportunities provided for practicing physicians during the fiscal year ending July 1, 1941 are outlined in tables 1-A, pages 710-711; 1-B, pages 714-720, and table 2, pages 722-725. Courses reported in table 1-A were of a peripatetic character in that instruction was offered to the practicing physician in a number of different places in or near his local community. Centers listed in table 1-B provided ample facilities for clinical instruction. In the first type of course the instructors usually do most of the traveling, while in the latter the physician desiring continuation study frequently travels to the center where clinical teaching may be emphasized over longer periods.

ORGANIZATION AND ADMINISTRATION

Opportunities for continuing professional study for practicing physicians near their home communities held a prominent place in twenty-eight states. These programs reached a total of three hundred and eight towns. In four other courses given over the state, the number of centers was not reported. Of thirty-one sponsoring agencies, committees on postgraduate education of state medical societies, independently or with the department of health or university, supervised twenty-three programs. State health departments were active participants in sixteen courses, the extension divisions of five universities and four state tuberculosis and public health associations cooperated in bringing programs to the practitioner.

In centers where ample clinical facilities are available (table I-B) graduate courses of less than one year's duration were offered in seventy-six centers located in thirty-three states and the District of Columbia. Ninety-nine agencies or combinations of agencies in forty states participated in the planning of programs, although courses sponsored by ten state agencies were given outside the state.

Of the medical schools of the country, forty-seven have given courses for practicing physicians during the past year, including six postgraduate schools or graduate departments of medical schools. Twenty-four health departments and nineteen state medical societies collaborated with the health departments or independently planned courses for the physicians of the state. In eleven instances hospitals were the agencies offering short periods of study. Other sponsors included five county medical societies, two academies of medicine, two universities not having medical departments, a clinical society, a national society and an institute of technology.

In medical school programs the deans were indicated as directing officer of about one half of the postgraduate courses. The head or a member of the department in which the study is offered often directed the course. Chairmen of postgraduate educational committees in universities and of medical associations, directors of departments of health and the chief of staff of several hospitals acted as administrators.

METHODS OF INSTRUCTION

Opportunities for instruction in obstetrics and pediatrics were prominent among the courses for physicians continuing professional study near their homes. Programs covering the general subjects of medicine and surgery were available in fourteen distinct areas, obstetrics and pediatrics in twelve, tuberculosis and communicable diseases in six and special subjects such as dermatology and syphilology, heart disease and cancer in six. Instruction was given at weekly intervals in fifteen of these courses, the number of classes varying from two to ten. Two courses were scheduled for six evenings and one for a period of from five to six days. One day programs for practitioners were arranged in nine of the courses. In addition to lectures and round table discussions, all but eight of the courses for physicians in their own communities were planned to include clinics, symposiums, demonstrations and conferences. Public buildings were utilized for lectures and discussion groups, and the facilities of hospitals were used for supplementary practical instruction in all but nine programs. The traveling faculties for these extramural courses were chosen about equally from within the state sponsoring the course and from an out of state position. Of these instructors, 80 per cent were from the faculties of medical schools.

The descriptions of all intensive courses gave evidence that clinical instruction was featured. The study of general medical subjects or the specialties was offered in various combinations by one third of the medical centers. In the specialty group, ophthalmology, otolaryngology, cardiology and syphilology appeared in the reports most often. Other special topics of study included allergy, aviation medicine, bronchoscopy, electrocardiology, endocrinology, esophagology, gastroscopy,

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TABLE 2.—CLINICAL CONFERENCES, GRADUATE ASSEMBLIES AND STUDY COURSES, 1940-1941

Location of Course	Sponsoring Agencies	Director of Program	Subjects	Duration of Course	Time Given	Type of Instruction	Facilities for Graduate Programs	Instructors	Eligible for Admission	Registration Fee	Approximate No. M.D.'s Attending	Additional Contributing Agencies and Funds
Arkansas												
Little Rock	St. Med. Soc., Univ. of Arkansas Sch. of Med.	Chairman, Comm. on P. G. Instruction	General	2 days	Twice yearly	Lectures, Clinics, Symposiums, Round Table Discussions	Medical School, hospital, outpatient department, laboratory	Med. sch., in state and out of state	Co. Med. Soc. members	$5	250	None
California												
Los Angeles and San Francisco	Calif. Heart Assn.	Chairman, Local Program Comm.	Cardiology	3 days	November and December	Lectures, Clinics, Symposiums, Demonstrations, Round Table Discussions, Movies	Public buildings, hospitals	Med. sch. and in state	M.D.'s	$5 (L. A.) $15 (S. F.)	168	None
Stockton	San Joaquin Co. Med. Soc.	Chairman, Comm. on P. G. Activities	General	1 day weekly, 7 times	Fall	Lectures, Clinics, Symposiums	Hospitals	Med. sch., in state and out of state	M.D.'s	$5	65	None
Colorado												
Grand Junction	St. Med. Soc., Mesa Co. Med. Soc.	Chairman, Western Slope Spring Clinics	General	1 day	Spring	Lectures, Discussions	Hotel	In state and out of state	M.D.'s	$2	69	None
Pueblo	St. Med. Soc., Pueblo Co. Med. Soc.	Chairman, Pueblo Spring Clinics	General	2 days	Spring	Lectures, Clinics	Hotel	In state and out of state	M.D.'s	$2	130	None
Connecticut												
New Haven	St. Med. Soc.	Chairman, Comm. on Clinical Congress	General and Special	3 days	September	Lectures, Symposiums, Discussions	Hospital and Med. Sch. Auditoriums	Med. sch., in state and out of state	M.D.'s	$3	700	Yale Univ. Sch. of Med.
District of Columbia												
Washington	Med. Soc. of D. C.	Chairman, Comm. on P. G. Education	Cardiovascular Dis., Office Surg. Procedures and Psychoneuroses	3 days, 4 sessions	September, January	Lectures	Hotel, Co. Med. Soc. building	Med. sch. and in state and out of state	M.D.'s	None to $4	1,565	None
Illinois												
Rock Island	Mississippi Valley Med. Soc.	Secretary	General	3 days	September	Lectures, Discussions, Movies, Exhibits	Hotel	Med. sch., in state and out of state	M.D.'s	$4	303	.....
Indiana												
Indianapolis	Indiana Univ. Sch. of Med.	Chairman, Dept. of P. G. Education	Pediatrics	1 day weekly, 4 times	March	Lectures, Clinical Discussions, Case Presentations	Medical School, hospitals	Med. sch., in state and out of state	M.D.'s	No	15	Federal funds
Iowa												
Iowa City	St. Dept. of Health, St. Univ. of Iowa Dept. of Prev. Med.	Director, St. Hygiene Lab.	Pneumonia Typing	2 days (repeated)	Fall	Lectures, Demonstrations, Laboratory Instruction	St. Hygiene Lab., St. Univ. Dept. Hyg. and P. H. Lab.	Med. sch.	M.D.'s and technicians	No	4	.....
Kansas												
Kansas City	Univ. of Kansas Sch. of Med., Ext. Division	Asst. to Dean	General	4 days	Spring	Lectures, Clinics, Symposiums, Demonstrations, Clin. Path. Confs.	Medical School, hospitals, outpatient department, laboratories	Med. sch.	M.D.'s	No	136	.....
Louisiana												
New Orleans	New Orleans Grad. Med. Assembly	President	General	4 days	March	Lectures, Clinics, Round Table Discussions	Hospitals, hotel	Med. sch. and out of state	M.D.'s	$10	1,000	None
Massachusetts												
Cambridge	St. Med. Assns. of Mass., N. H., R. I., Me. and Vt.	Chairman, New England P. G. Assembly Comm.	General	2 days	November	Lectures	Theater, hall	Med. sch. and out of state	Licensed physicians	$3	700	Harvard Univ.

Minnesota												
Minneapolis	St. Dept. of Health, St. Med. Assn., Univ. of Minn. Med. Sch.	Director, Div. of Child Hygiene	Obstetrics-Gynecology, Pediatrics	3 days (each course)	Spring	Lectures, Symposiums, Demonstrations, Round Table Discussions	Hospitals, U. of Minn. Center for Continuation Study	Med. sch., in state and out of state	M.D.'s	$15 [1]	76	.....
	Univ. of Minnesota Dept. of P. G. Educ.	Director	General	3 days	Fall, Spring	Lectures, Clinics, Symposiums, Demonstrations, Round Table Discussions	Hospitals, U. of Minn. Center for Continuation Study	Med. sch.	M.D.'s	$2-$15	140	Commonwealth Fund
Missouri												
Kansas City	Kansas City S. W. Clin. Soc.	Director of Clinics	General	4 days	Fall	Lectures, Round Table Discussions	Auditorium	Med. sch., in state and out of state	M.D.'s, medical students	$5	1,000	Co. Med. Socs.
St. Louis	St. Louis Clinics	President	General	4 days	May	Lectures, Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Public buildings	Med. sch. and out of state	M.D.'s	$10	100	None
Nebraska												
Omaha	Omaha Mid-West Clin. Soc.	Secretary-Director of Clinics	General	5 days	October	Lectures, Clinics, Discussions	Hotel	Med. sch., in state and out of state	M.D.'s	$5	980	Dues from members
New Jersey												
Newark	St. Med. Soc.	General Chairman, Fall Clin. Conf.	General	2 days	November	Lectures, Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Academy building, hospitals	In state	M.D.'s	No	350	Essex Co. Med. Soc.
New York												
Albany	St. Dept. of Health, Albany Med. Coll.	Director, Ext. Course in Public Health	Public Health	2 days plus 11 field trips	Throughout year	Correspondence Course, Clinics, Demonstrations, Conferences, Field Trips	Hospitals, laboratories	Med. sch., health officers, lab. directors	Licensed physicians	$30	119	None
New York City	New York Tuberculosis and Health Assn.	Sec., Industrial and Social Hyg. Comms.	Industrial Hygiene, Venereal Disease	1 day	Varies	Symposiums	Academy of Medicine	Med. sch.	M.D.'s and others	No	...	.....
		Chairman, New York Heart Assn.	Cardiology	7 sessions	Throughout year	Lectures	Medical Society buildings	Med. sch., in state and out of state	M.D.'s and medical students	No	...	None
		Chairman, Tuberculosis Sanat. Conf. of Metro. New York	Tuberculosis	4 sessions	Throughout year	Lectures, Symposiums, X-ray Presentations	Hospitals, medical college	Med. coll. and in state T. B. specialists	M.D.'s	No	500	Local T. B. Assns.
Rochester	Univ. of Rochester Sch. of Med., Bausch and Lomb Optical Co.	Assoc. Prof. of Ophthalmology	Ophthalmology	2 days	August	Lectures, Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Medical School, hospital, outpatient department	Med. sch., in state and out of state	M.D.'s	$40	65	None
North Carolina												
Durham	Duke Univ. Sch. of Med.	Dean	Diseases of Metabolism and the Blood Forming Organs	3 days	October	Lectures, Clinics, Symposiums	Medical School, hospital	Out of state	M.D.'s	No	544	State Health Dept., federal funds
	St. Dept. of Public Instr., Div. of Coop. in Educ. and Race Relations	Secretary, Subcomm. for Negro Health and Educ.	General	1 day	October	Lectures, Clinics, Demonstrations, Symposiums	Hospital	Med. sch.	Negro M.D.'s	$5	60	Duke Univ., Univ. of North Carolina
Ohio												
Cleveland	Amer. Acad. of Ophthalmology and Otolaryngology	Secretary for Instruction	Ophthalmology, Otolaryngology	3 days	October	Lectures, Demonstrations, Discussions, Slides	Hotel	Out of state	Members and guests	$6-$12	1,700	None
	Western Reserve Univ. Sch. of Med., City Hospital	Chairman, Comm. on Programs	Practical Reviews of Special Subjects	14 lectures	October	Lectures, Demonstrations, Discussions	Hospital	Med. sch., hospital staff	M.D.'s	No	48	None

TABLE 2.—CLINICAL CONFERENCES, GRADUATE ASSEMBLIES AND STUDY COURSES, 1940-941—Continued

Location of Course	Sponsoring Agencies	Director of Program	Subjects	Duration of Course	Time Given	Type of Instruction	Facilities for Graduate Programs	Instructors	Eligible for Admission	Registration Fee	Approximate No. M.D.'s Attending	Additional Contributing Agencies and Funds
Oklahoma												
Oklahoma City	Oklahoma City Clin. Soc.	Director of Clinics	General	4 days	Fall	Lectures, Symposiums, Round Table Discussions	Public buildings	Med. sch., in state and out of state	M.D.'s	$10	549	None
Pennsylvania												
Philadelphia	Mercy Hospital	Medical Director	General	3 days	May	Lectures	Hospital	Med. sch., in state and out of state	M.D.'s, students, dentists	No	146	None
	Germantown Dispensary and Hosp.	Director of Laboratories	General	3 days	Winter	Lectures, Clinics, Demonstrations, Symposiums, Round Table Discussions, Clin. Path. Confs.	Hospital, laboratory	Med. sch. and in state	M.D.'s	No	88	None
	Philadelphia Co. Med. Soc.	Committees	Ophthalmology, Diabetes, Electrocardiography	5 to 6 sessions	Throughout year	Lectures, Discussions, Demonstrations, Seminars	Medical Society Building	Med. sch. and in state	M.D.'s	No	500	None
	St. Med. Soc.	Chairman, Steering Comm.	Tuberculosis, Syphilology, Maternal and Child Health	4 days	April	Lectures, Clinics	Hospital	Med. sch.	Negro M.D.'s	...	...	Phila. Gen. Hosp.
Pittsburgh	Allegheny Co. Med. Soc.	Chairman, Grad. Educ. Comm.	General	1 day weekly, 5 to 10 times	Varies	Clinics, Demonstrations	Medical School, hospitals, clinics, outpatient depts.	Med. sch. and in state	M.D.'s	$5-$50	10 (per course)	None
South Carolina												
Orangeburg	St. T. B. Assn., St. Board of Health, State College	Director of Negro Program	Obstetrics, Pediatrics, Tuberculosis, Venereal Diseases	3 days	January	Lectures, Round Table Discussions, Films, Consultations	College	In state and out of state	Negro M.D.'s	No	31	U. S. P. H. S., Nat'l T. B. Assn.
Tennessee												
Knoxville	Knox Co. Med. Soc.	Secretary, Tenn. Valley P. G. Med. Assembly	General	3 days	June	Lectures, Round Table Discussions	Hotel	Med. sch., out of state	Co. Med. Soc. members	$4	250	None
Memphis	Mid-South P. G. Med. Assembly	Secretary	General	4 days	February	Lectures, Round Table Discussions	Hotel	Med. sch., in state and out of state	M.D.'s, students	$5	800	None
Nashville	National Found. for Infantile Paralysis, Vanderbilt Univ. Sch. of Med.	President, N. Y. C.	Poliomyelitis	6 sessions	April	Lectures	Medical School	Out of state	M.D.'s and guests	No	...	None
Texas												
Dallas	Dallas Southern Clin. Soc.	Director of Clinics	General, Special	4 days and 3 days	March, June	Lectures, Clinics, Symposiums, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Hospitals, hotel, clinics	Med. sch., in state and out of state	Co. Med. Soc. members	$15, $5	825	Baylor Univ. Coll. of Med.
Houston	P. G. Med. Assembly of S. Texas	General Chairman, Program Comm.	Medical Specialties	3 days	December	Lectures, Round Table Discussions, Symposiums	Hotel	Med. sch. and out of state	M.D.'s, interns, students	$10	600	None
Marshall	N. E. Texas P. G. Med. Assembly	Chairman	General	1 day	December	Lectures, Round Table Discussions, Symposiums	Hotel	Med. sch., in state	M.D.'s	$1	50	N. E. Texas Med. Assn.
Prairie View	St. Dept. of Health, Texas T. B. Assn.	Exec. Sec., T. B. Assn.	Tuberculosis, Syphilis, Obstetrics, Pediatries, Heart Disease	4 days	March	Lectures, Clinics, Demonstrations	Hospital, Lecture rooms of St. Coll.	Med. sch., in state and out of state	Negro M.D.'s	No	62	Prairie View St. Coll., Nat'l T. B. Assn.
San Antonio	International P. G. Med. Assembly	Chairman, Program Comm.	General	3 days	January	Lectures, Round Table Discussions, Scientific Exhibits	Hotel	Med. sch., out of state	M.D.'s	No	800	None

Utah												
Salt Lake City	St. Med. Assn., Univ. of Utah Med. Sch.	P. G. Comm.	General	3 days	Varies	Lectures, Clinics, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Medical School, hospital, outpatient dept.	Med. sch., in state and out of state	M.D.'s	No	400	St. Bd. Health
Vermont												
Burlington	St. Med. Soc., Univ. of Vermont Coll. of Med.	Dean, Univ. of Vermont Coll. of Med.	General Medicine	3 days	Spring	Lectures, Clinics, Symposiums, Demonstrations, Round Table Discussions, Clin. Path. Confs.	Hospital, Med. Coll., outpatient department	Med. sch., in state and out of state	M.D.'s, students	No	135	None
Virginia												
Charlottesville	Univ. of Virginia Dept. of Med., St. Med. Soc.	Chairman, Comm. on Grad. Clinics	General	1 and 2 days	Spring and Fall	Lectures, Clinics, Symposiums	Medical School, hospital	Med. sch., out of state	M.D.'s	No	160	None
University	Univ. of Virginia Dept. of Med., St. Med. Soc.	Dean	Ophthalmology, Otolaryngology	4 days	December	Lectures, Clinics, Round Table Discussions, Clin. Path. Confs.	Medical School, hospital, amphitheater	Med. sch., in state and out of state	M.D.'s	$15-$25	45	None
Washington												
Spokane	Pacific N. W. Med. Assn.	Secretary	General	4 days	June	Lectures, Round Table Discussions	Hotel	Med. sch. and out of state	M.D.'s	$12	329	St. Med. Soc.
Wisconsin												
Milwaukee	Med. Soc. of Milwaukee Co.	Exec. Secretary	Allergy, Geriatrics	1 day weekly, 4 times	Spring and Fall	Lectures, Clinics	Medical School auditorium, hospital	Med. sch., in state and out of state	Co. Med. Soc. members	None, $2	250	Marquette U. Med. Sch., Co. and Children's Hosps.

1. Stipend to cover registration fees and per diem expense.

(Continued from page 721)

gynecology, hematology, industrial medicine, infections, metabolism, physical therapy, modern therapy, nutrition, orthopedics, peripheral vascular diseases, parasitology, psychology, psychiatry, public health, radiology, silicosis, tropical medicine, tuberculosis, urology and venereal disease. Special courses not enumerated were also available at eighteen medical schools and universities. Courses in preclinical subjects were recorded on only nine questionnaires.

The duration of study in centers with clinical facilities varied from five days to one year. Sixty-one courses were completed within three weeks or less, while eighteen lasted a month or more. In seven medical centers, enrolment for periods of from one week to a year was possible depending on the course length. Nine centers had no available courses of less than a month, the duration varying from one to nine months. Courses were available to practicing physicians throughout the year in thirty-five centers.

In only three instances was the work in the short intensive courses wholly didactic. In most cases it was indicated that all available facilities were advantageously used in the instruction. Clinical instruction and practical experience included laboratory and operative demonstrations, symposiums, assignment of patients, case presentation, clinical pathologic and roentgen ray conferences, movies and bedside teaching. As particular experience in special courses, facilities were utilized for dog surgery, laboratory experience, antepartum and postpartum clinics and home deliveries. In addition to medical schools and hospitals, laboratories, outpatient departments, clinics and local health units cooperated by placing their facilities at the disposal of the students.

The faculties of the medical schools offering continuation courses were called on for assistance in instruction in all but three courses. Many additional instructors were specialists in their fields, an equal number being chosen from within the state as from out of state.

REGISTRATION

All of these circuit courses had as their purpose the instruction of physicians practicing in or near the community in which the course was given. The practicing physician was invited to twenty-three of these courses; in eight others membership in the county medical society was a requirement. The number registered for any one course ranged from 37 in one state to 1,459 in another. The median number was 439 enrolled in extramural continuation study courses in any one state.

The M.D. degree was necessary for enrolment in all courses featuring clinical instruction, and in only a few were additional qualifications required. Medical students were admitted to two courses, and public health workers, hygienists and psychologists registered in four specialized courses. M.D.'s reported attending these continuation courses totaled 12,548. Small classes for intensive instruction and the individual use of clinical facilities were the rule. Fifty-four centers had registrations of less than 40; in fifteen the enrolment ranged from 40 to 75, in twelve from 75 to 200 and in thirteen over 200. In only six instances were more than 500 physicians registered, this enrolment usually indicating repeated short courses held in postgraduate schools or departments throughout the year. As an exception, the course in ophthalmology at George Washington University School of Medicine was given for over 500 physicians, and the course in aviation medicine for 170.

FINANCIAL SUPPORT

For twenty-four of the peripatetic continuation courses no charge to the physician was made. Only one fee was more than $10, and in nine courses in which a registration fee was charged it was $10 or less. Twenty-four state medical societies made substantial contributions to these programs. Federal funds were available through state agencies, and fifteen courses benefited. In the field instruction eight extension divisions of universities participated, and continued financial assistance was given in four instances by the Commonwealth Fund, the Rackham Fund and the Kellogg Foundation.

In continuation courses featuring clinical instruction of more than five days in one center the fees required ranged from a registration fee of $2 to tuition of $1,000. In twenty-three courses no fees were charged the individual; state departments of health used federal funds to defray the costs in nineteen of these. Funds secured from federal bureaus also assisted in financing seven courses for which a small registration fee was charged. Medical schools contributed most frequently, with state departments of health and state medical societies sharing expenses. Special contributions were made by the Bingham Associates Fund, the Commonwealth Fund of New York, the Rosenberg Foundation, the Rackham Fund, the Kellogg Foundation, the Mayo Foundation, the Trudeau Foundation and the Lillie Babbitt Hyde Foundation.

CLINICAL CONFERENCES, GRADUATE ASSEMBLIES AND STUDY COURSES

In twenty-eight states and the District of Columbia graduate assemblies of less than five days and study courses were held during 1940-1941. These data are summarized in table 2, pages 722-725. Fifty-two reported assemblies or short lecture courses were held under the auspices of sixty-four agencies either independently or in collaboration. Fifteen state medical societies and thirteen medical schools sponsored conferences and assemblies. Six were planned by departments of welfare. In twelve instances postgraduate medical societies organized for the sole purpose of conducting assemblies were publicized as the sponsors. Several of these stemmed from county medical societies, and, in addition, committees of seven county medical societies directed such courses. Only four heart and tuberculosis associations reported this type of study, and three hospitals were responsible for conference courses. An especially appointed director of the clinics or chairman of the committee responsible for the assembly was reported for three fourths of the courses. In the remaining fourth in medical schools, hospitals and departments of health, the director was of the faculty or staff.

The majority of the large assemblies surveyed pertinent topics in general medicine and surgery, twenty-eight reporting this field covered in the lectures. Conferences devoted to more than one or two specialties were three in number. Scattered study courses sponsored by medical societies or agencies concentrating on certain fields included the varied subjects, as allergy, cardiology, electrocardiology, geriatrics, metabolism, industrial hygiene, obstetrics, office surgery, ophthalmology, otolaryngology, psychoneuroses, poliomyelitis, pneumonia typing, pediatrics, public health, tuberculosis and venereal disease. With one exception all continuous conferences were of four days or less. Ten study and lecture courses were given intermittently over a month or more. The assemblies were usually held in centers large enough to accommodate the registrants and with facilities for clinical and practical work and for scientific exhibits. The programs were distributed rather evenly throughout the year, sixteen scheduled in the fall, ten during the winter and eighteen in the spring. A few others were given in the summer, and some in metropolitan areas were repeated throughout the year.

Of the fifty-two courses, eighteen were confined to didactic instruction. The remainder planned to utilize the facilities of hospitals, medical schools, outpatient departments and laboratories to conduct clinics, demonstrations, clinical pathologic conferences and symposiums. Faculty members of medical schools took an active part in forty-two of the courses. Instructors not from faculties of medicine were evenly divided between physicians from the state and physicians engaged from outside the state.

Practicing physicians were eligible for admission to all the graduate assemblies, and four courses sponsored by medical societies required membership in the county medical society. Medical students were invited to be guests at six of the courses. Registration fees ranged from $1 to $50 in twenty-five courses; in seventeen no registration fee was charged. The largest attendance recorded at any one assembly was 1,700; one class had but 4 physicians enrolled. The medical attendance during the past year was 209.

Thirty-six medical and clinical societies supported programs of this type; the departments of health through federal funds gave financial assistance to six. Four tuberculosis associations and thirteen medical schools supported, in part, as many courses.

OPPORTUNITIES FOR NEGRO PHYSICIANS

The Flint-Goodridge Hospital of Dillard University, New Orleans, has completed the first five years of the annual two week postgraduate course for Negro physicians. Approximately 20 per cent of these physicians of ten Southern states have attended one or more sessions. The faculty is composed chiefly of members of the medical school faculties of Tulane University of Louisiana and Louisiana State University, New Orleans, in addition to visiting lecturers.

The Meharry Medical College, Nashville, Tenn., during August and September 1940 gave a series of short courses in pediatrics for eighteen physicians sent to the college by the Division of Maternal and Child Health, the Department of Health of South Carolina. Each course was of two weeks' duration and registration for each was limited to five physicians. Round table discussions and bedside and clinic practice under close supervision were included.

The first postgraduate assembly for Negro physicians in South Carolina was held at State College, Orangeburg, over three days in January 1941. The National Tuberculosis Association, the U. S. Public Health Service and five South Carolina organizations sponsored the assembly. Lectures in obstetrics, pediatrics, tuberculosis and venereal diseases were given by five South Carolina and four out of state physicians.

The success of the first annual Postgraduate Institute for Negro Physicians held in Pittsburgh prompted repetition of the four day meeting in Philadelphia during

April 1941. Subjects included were tuberculosis, syphilis, child health and maternal welfare. The institutes were sponsored by the Medical Society of the State of Pennsylvania.

Short courses of from one to two weeks were given at Tuskegee Institute, Alabama, at the University of Georgia School of Medicine and at the Medical College of Virginia.

SUMMARY

1. Forty-four states and the District of Columbia provided a form of continuation study for physicians and, when clinical conferences were included, forty-five states and the District of Columbia offered graduate opportunities. From Delaware, New Hampshire and Wyoming no courses were reported.

2. There were twenty-eight states that offered continuation study for the practicing physician in or near their home community. There were twenty-eight distinct programs, which reached a total of three hundred and eight towns. State medical societies independently or with state boards of health sponsored the majority, while extension divisions of universities and state tuberculosis and public health associations cooperated in some states. Continuation study in centers where there are ample clinical facilities were offered in seventy-six centers located in thirty-three states and the District of Columbia. Ninety-nine agencies or combinations of agencies in forty states participated in the planning of the programs, although courses sponsored by ten state agencies were given outside the state. Medical schools offered more than half of the courses, including postgraduate schools or graduate departments of medical schools. Second in sponsoring programs were state health departments, while state medical societies collaborated with health departments or independently planned courses for the physicians of the state.

3. The approximate attendance at these circuit courses, centralized clinical courses and graduate assemblies totaled 43,621. The individual registration of these groups in the order named was 14,063, 12,548 and 17,010.

4. The study of general medical and surgical subjects or the various specialties or subspecialties in various combinations were offered. Clinical instruction and practical experience included laboratory and operative demonstrations, symposiums, assignment of patients, case presentation, clinical pathologic and roentgen ray conferences, movies and bedside teaching.

5. Out of state instructors participated as frequently as physicians of the state. Faculties of medical schools contributed 80 per cent of the instructors for the extramural courses and conducted most of the instruction in which clinical material was featured over five days or more.

6. Registration fees were charged infrequently for those courses offered in smaller communities, and in only one instance was a fee of more than $10 charged. For graduate programs featuring clinical instruction at one center, fees ranged from $2 to $1,000.

SCIENTIFIC SOCIETIES

Organizations holding scientific sessions not primarily graduate assemblies, but of specific value to the practicing physician, numbered one hundred and seventy-eight. The annual scientific program of the American Medical Association was the climax of sessions in forty-seven states, the District of Columbia, Hawaii, the Philippines and Puerto Rico. National societies representing all of the specialties held seventy-seven meetings of from one to six days' duration. Twenty-five interstate agencies sponsored meetings, as did several special state and metropolitan organizations.

APPROVED EXAMINING BOARDS IN MEDICAL SPECIALTIES

At the annual session of the American Medical Association in 1933 the House of Delegates authorized the Council on Medical Education and Hospitals to formulate standards and officially approve such certifying boards in the specialties as would meet these requirements. Examining and certifying boards had already been established in ophthalmology, otolaryngology, obstetrics and gynecology and in dermatology and syphilology, but it was felt that there was need for a national and uniform standard governing all fields of medical practice in order that properly qualified physicians might readily be differentiated from the self-appointed specialists. The resolution of the House of Delegates urged that the machinery of the American Medical Association, including the publication of the American Medical Directory, be used in furthering the work of boards accredited under this plan.

Standards governing the approval of specialty boards were formulated by the Council and approved by the House of Delegates in 1934. These standards relating to the organization and operation of these boards contain also the minimum qualifications required for certification as a specialist. The latter include graduation from an approved medical school, an internship of not less than one year in a hospital acceptable to the Council, and a period of specialized training in a selected field.

Approved Examining Boards in Medical Specialties

Key No. A.B.	Name of Board	Year of Incorporation	Certificates Awarded* Total Issued to March 1, 1940	Certificates Awarded* Total Issued to July 1, 1941
1.	American Board of Pediatrics	1933	1,470	1,716
2.	American Board of Psychiatry and Neurology	1934	832	1,140
3.	American Board of Orthopaedic Surgery	1934	652	704
4.	American Board of Dermatology and Syphilology	1932	492	553
5.	American Board of Radiology	1934	1,404	1,693
6.	American Board of Urology	1935	677	784
7.	American Board of Obstetrics and Gynecology	1930	1,051	1,469
8.	American Board of Internal Medicine	1936	2,158	2,679**
9.	American Board of Pathology	1936	706	8:5
10.	American Board of Ophthalmology	1917	1,706	1,875
11.	American Board of Otolaryngology	1924	2,977	3,265
12.	American Board of Surgery	1937	1,274	1,703
13.	American Board of Anesthesiology	1938	86	132
14.	American Board of Plastic Surgery	1937	100	109
15.	American Board of Neurological Surgery	1940	...	88
	Totals		15,594	18,645

* Active diplomates.

** Certification in the subspecialties: Allergy 59; cardiovascular disease 56; gastroenterology 11; tuberculosis 9; total, 135.

Fifteen specialty boards, eleven of which have been organized since 1933, meet the standards of the Council and are now fully approved by the Council, representing the following specialties:

Anesthesiology	Pathology
Dermatology and Syphilology	Pediatrics
Internal Medicine	Plastic Surgery
Neurological Surgery	Psychiatry and Neurology
Obstetrics and Gynecology	Radiology
Ophthalmology	Surgery
Orthopaedic Surgery	Urology
Otolaryngology	

The American Board of Plastic Surgery has not as yet examined any candidates, although certificates have been issued to those in the founders' group. All other boards regularly hold examinations for certification. The dates of examinations of these boards are published in THE JOURNAL every other week. To conserve space in the biographic section of the American Medical Directory, a key number has been assigned to each board. Those certified by these boards, with the exception of plastic surgery and neurological surgery, are so identified in the sixteenth edition of the Directory. The American Board of Plastic Surgery had expressed the desire not to credit in this edition its diplomates, since all eligible had not had an opportunity to receive certification, while the American Board of Neurological Surgery was incorporated after publication of the Directory.

Final action was taken in regard to the recognition of proctologists by the American Board of Surgery on May 1 last. The American Board of Surgery will now recognize those qualified in the field of proctology, provided such applicants meet the same requirements as exacted of those wishing to qualify in general surgery and pass the same examination as is required of the board's regular applicants. In addition to this, those desiring to qualify in the field of proctologic surgery will be required to pass an additional clinical test to be given by a committee representing the proctologic field immediately following the examination in part II as given by this board. The Council on Medical Education and Hospitals approved this arrangement.

The American Board of Internal Medicine, under a somewhat similar arrangement, has certified specialists in allergy, cardiovascular disease, gastroenterology and tuberculosis.

The identifying numerical symbols of the boards, the year incorporated, the number of certificates awarded up to March 1, 1940 and July 1, 1941, respectively, appear in the accompanying tabulation. The number certified by some of the boards has been reduced by death. Recorded therefore are the active diplomates.

On July 1, 1941 there were 18,645 physicians certified by the fifteen boards in operation at that time. In 1940 on March 1, 15,594 had been certified, and 3,051 for the following sixteen months. In internal medicine 2,679 physicians have been certified and in surgery 1,703. These boards have been operating less than five years. The greatest number certified by any one board were 3,265 who received the certificate of the American Board of Otolaryngology since its organization in 1924. This is the second oldest board in existence.

Each of these boards has published a booklet containing a brief statement regarding its organization, personnel, purposes and qualifications for eligibility for certification. The data contained in these announcements are reproduced herewith.

AMERICAN BOARD OF ANESTHESIOLOGY, Inc.

RALPH M. WATERS, President, Madison, Wis.
HENRY S. RUTH, Vice President, Merion Station, Pa.
PAUL M. WOOD, Secretary-Treasurer, 745 Fifth Avenue, New York.
JOHN S. LUNDY, Rochester, Minn.
EMERY A. ROVENSTINE, New York.
HARRY BOYD STEWART, Tulsa, Okla.
RALPH M. TOVELL, Hartford, Conn.
PHILIP D. WOODBRIDGE, New Haven, Conn.
CHARLES F. MCCUSKEY, Glendale, Calif.

HISTORY

The plan for this organization was devised to conform with those of other examining boards in medical specialties, by a committee representing the American Society of Anesthetists, Inc., the American Society of Regional Anesthesia, Inc., and the Section on Surgery of the American Medical Association. These organizations adopted the tentative plans submitted, and the formation of the American Board of Anesthesiology, Inc., an affiliate of the American Board of Surgery, Inc., was completed on June 2, 1937. The Advisory Board for Medical Specialties, and the Council on Medical Education and Hospitals of the American Medical Association approved the affiliation in 1938.

In 1941 the Advisory Board for Medical Specialties approved the establishment of the American Board of Anesthesiology, Inc., as a separate major board, with the unanimous consent of the participating societies and the surgical boards which are members of the Advisory Board.

Diplomates of this Board will be designated "A.B. 13" in the Directory and Biographical Departments of the American Medical Association.

PURPOSES

1. To establish criteria of fitness to be designated a specialist in the practice of anesthesiology.

2. To improve educational facilities and practice in medical schools and hospitals, and furnish lists of these, together with lists of individual instructors who give adequate instruction and training in anesthesiology.

3. To arrange, control, and conduct examinations to determine the qualifications, and grant a certificate to those who voluntarily apply and meet the required standards. Such certification will serve to provide the public and the professions with the opportunity to select the best available service. (Conferring of degrees is a prerogative of the universities, and the Board of Anesthesiology makes no attempt to grant degrees, regulate or control the practice of anesthesiology in any way whatsoever, by license or restriction.)

VALUE OF CERTIFICATE

The organizations which participate in forming this board and sponsoring the activities as well as other societies or institutions, attach considerable importance to its certificate. The medical and lay public, as well as hospital directors, utilize the certification by this board in determining those who are well qualified as specialists in anesthesiology.

Although the Directory of the American Medical Association indicates those practicing in the various specialties the lists of holders of certification by specialty boards are available in the form of the Directory of Medical Specialists.

The American Board of Anesthesiology will cooperate with institutions and individuals in preparing plans for instruction in anesthesiology and in offering suggestions for the organization of new departments in the specialty.

QUALIFICATIONS FOR ELIGIBILITY TO CERTIFICATION

A. *General.*—1. An applicant's moral and ethical standing in the profession must be satisfactory to the entire board. The board must be assured that the applicant is engaged in the practice of anesthesiology as a specialty and that he intends to continue to be so engaged.

2. Membership is required in the American Medical Association or membership in such other medical societies as are recognized for this purpose by the Council on Medical Education and Hospitals of the American Medical Association. Membership in other societies shall not be required.

3. Practice must be *limited* to anesthesiology.

4. In exceptional instances the board may, in its discretion, accept for examination candidates who have met all the preliminary requirements and have clearly demonstrated their identity as an anesthetist over a period of years but whose formal training does not comply with the full requirements to be exacted in the future.

B. *Professional Standing.*—1. An applicant must be a graduate of a grade A school in the United States or Canada recognized by the Council on Medical Education and Hospitals of the American Medical Association, or a graduate of an approved foreign school.

2. Satisfactory evidence must be supplied of completion of an internship of not less than one year in a hospital approved by the same council, or its equivalent in the opinion of the board.

3. An applicant must establish in a manner satisfactory to the Board of Anesthesiology: that he is a physician duly licensed by law to practice medicine; that he is of high ethical and professional standing, and that he has received adequate special training in anesthesiology.

C. *Special Training and Practice.*—1. Before certification the candidate must have had an active experience limited to anesthesiology of not less than five (5) calendar years (including period of training).

2. The board recommends the inclusion of at least two years of carefully supervised instruction in the clinical phases of anesthesiology in hospital clinics, dispensaries, and diagnostic laboratories recognized by the Council on Medical Education and Hospitals of the American Medical Association as competent in the teaching and practice of anesthesiology. In addition, instruction in anatomy, physiology, pharmacology, biochemistry and other basic sciences which are necessary to the proper understanding of the problems involved in the specialty of anesthesiology is required.

(The board believes that for those entering the specialty after Jan. 1, 1944, the facilities for special training in anesthesiology will be available and such training will be sufficiently standardized that special training in anesthesiology may be interpreted to include after that date:

(*a*) A period of study, after the internship, of not less than three years in clinics, dispensaries, hospitals, and laboratories recognized by the Council on Medical Education and Hospitals of the American Medical Association as competent to provide a satisfactory training in the special field of anesthesiology.)

EXAMINATIONS

The qualifying examination will be divided into Part I, written, Part II, oral, and Part III, practical.

Part I

1. An applicant, to be eligible for Part I, must meet all requirements and his credentials must be approved by the board.

2. At the board's discretion a candidate may apply for certification and may take the written examination on basic science and clinical practice on the completion of two years of his courses of special training. Subsequently it shall be necessary for him to await the prescribed length of time to proceed with further examinations. Candidates who successfully pass Part I examinations (and satisfy the time requirement) proceed automatically to Part II examinations.

3. Part I may be given simultaneously in several centers, throughout the United States, which the board may determine suitable for the purpose.

Part II

1. In order to be eligible for Part II, a candidate must have successfully passed Part I in addition to having met the necessary requirements and having presented definite evidence of an adequate experience in anesthesiology satisfactory to the board.

2. It is probable that Part II examinations will be held near the time and at the place of the annual convention of the American Medical Association. Later, however, as the demand grows, it may be necessary to establish subsidiary centers where this part may be held.

Part III

1. It is believed that the practical examination in this field is slightly different from that in most specialties. The examiners will observe the work of the candidates in their own or similar operating room surroundings, their relations to other staff members, and investigate their professional standing.

CONDUCT OF EXAMINATION

Carefully conducted and thorough examinations will be required of candidates. The aim will be to avoid unduly exacting standards above present facilities for study and practice in anesthesiology, and on the other hand, to prevent laxity, which would nullify the main purpose of the certificate. Thus the type of the examination will depend on a careful review of the work done, years of practice, special courses of study, and professional standing of the applicant.

Written examinations will cover such topics as anatomy, biochemistry, physiology, pharmacology, pathology, physical diagnosis, therapeutics, clinical practice, and public health in relation to anesthesiology.

Oral examinations will cover topics in the above list especially as to their clinical application.

Practical demonstrations will be required of the management of the candidate's clinical practice *in his local surroundings.* This may include inspection of clinical records, records of departmental activities, library facilities, available apparatus, and demonstrations of application of anesthetic agents, methods and all techniques included in anesthesiology.

GRADES

A candidate must receive a passing average for each part, to be entitled to certification. No candidate shall pass a part who does not receive a grade of 60 per cent or more in each subject of such part. An average grade of 75 per cent shall be required for passing.

A candidate who fails in his examination in Part I will have his papers reviewed by the entire board and will be entitled to reexamination at yearly intervals for two consecutive years without further payment of fee. The board may, however, for sufficient reason, deny a candidate the privilege of reexamination.

Applicants who fail to exercise the examination privilege within three (3) years of the date of filing the application are required to file a new application and pay a new application fee.

The fee shall be $75. Twenty-five dollars shall be paid on filing the application (of which sum $15 will be returned if the candidate is not accepted for examination) and the remaining $50 shall be paid before taking the examinations.

This board is a nonprofit organization, all fees to be used to extend the existing facilities for training in anesthesiology, after deducting necessary expenses for maintenance of the office, and the conducting of examinations. The board reserves the right to increase the fee when found necessary.

REVOCATION OF CERTIFICATE

All certificates issued by the board shall be subject to revocation by the board at any time, in case it shall determine in its sole judgment that a candidate who has received a certificate either was not properly qualified to receive it or has become disqualified since its receipt.

ADDITIONAL INFORMATION

Every candidate applying for certification *must personally appear before the board* before being certified.

Application blanks must be made on special blanks which may be procured from the Secretary of the American Board of Anesthesiology. They must be completely and accurately filled out, accompanied by the other required credentials, and filed with the secretary of the board at least ninety days prior to the date of examination.

The Council cannot make any eligibility rulings. These are made only by the Committee on Preliminary Examinations and the Committee on Requirements and Credentials after reviewing the candidate's formal application. Applications cannot be considered for classification and action by these committees unless accompanied by an application fee of $25.00, $10.00 of which is not returnable.

Application blanks contain the following statement:

"I hereby make application to the American Board of Anesthesiology, Inc., for the issuance to me of a Certificate of Qualification as a Specialist in Anesthesiology and for examination relative thereto, all in accordance with and subject to its rules and regulations, and enclose fee of seventy-five dollars ($75.00).[1] I agree to disqualification from examination or from the issuance of a Certificate of Qualification or to surrender of such certificate as directed by the board in the event that any of the statements hereinafter made by me are false or in the event that any of the rules governing such examinations are violated by me or in the event that I did not comply with *or shall violate* any of the provisions of the Certificate of Incorporation or Constitution and By-Laws[2] of the American Board of Anesthesiology, Inc., or both, as then constituted. I agree to hold the American Board of Anesthesiology, Inc., its members, examiners, officers and agents free from any damage or complaint by reason of any action they, or any of them, may take in connection with this application, such examinations, the grade or grades given with respect to any examination, or the failure of said board or corporation to issue to me such Certification of Qualification."

Proper forms for making application and other information will be furnished by the secretary-treasurer.

1. This may be paid as follows: $25 with application ($10 registration fee not returnable) and $50 before examination.

2. Ignorance of the provisions of the Certificate of Incorporation and of the Constitution and By-Laws is not considered by the board to be a valid excuse for violations.

AMERICAN BOARD OF DERMATOLOGY AND SYPHILOLOGY

HOWARD FOX, President, New York.
FREDERICK D. WEIDMAN, Vice President, Philadelphia.
C. GUY LANE, Secretary-Treasurer, 416 Marlboro Street, Boston.
CHARLES C. DENNIE, Kansas City, Mo.
JOSEPH GARDNER HOPKINS, New York.
HENRY E. MICHELSON, Minneapolis.
PAUL A. O'LEARY, Rochester, Minn.
FRANCIS E. SENEAR, Chicago.
JESSE BEDFORD SHELMIRE, Dallas, Texas.

ORGANIZATION

At the 1931 meeting of the American Dermatological Association, a committee was appointed to determine the advisability of forming an American board for the certification of competent practitioners in this specialty similar to boards created by the ophthalmologists, the otolaryngologists and by the obstetricians and gynecologists. A similar committee was appointed by the Section on Dermatology and Syphilology of the American Medical Association at its meeting in the same year. A favorable report was rendered by each committee at the 1932 meeting of each of the above organizations.

The American Dermatological Association voted to accept the report of this committee, and the president appointed the following four members to represent the association on the newly formed American Board of Dermatology and Syphilology:

Dr. Jay F. Schamberg, Philadelphia.
Dr. Howard Fox, New York.
Dr. Harold N. Cole, Cleveland.
Dr. Arthur W. Stillians, Chicago.

The Section on Dermatology and Syphilology of the American Medical Association also accepted the report of its committee and the chairman appointed the following members to serve as its representatives:

Dr. Howard Morrow, San Francisco.
Dr. William H. Mook, St. Louis.
Dr. George M. MacKee, New York.
Dr. C. Guy Lane, Boston.

The first meeting of the board was held in New Orleans on May 11, 1932, at which time officers were elected. At another meeting held on Nov. 11, 1932, in Philadelphia the organization was completed and resolutions were adopted concerning the proper procedure to be followed by the board. On Nov. 29, 1932, the board was incorporated under the laws of the state of Delaware.

In 1937 the American Academy of Dermatology and Syphilology was formed, and in November 1939 a plan was finally approved whereby the board would be composed of three representatives from each national dermatologic society, viz., the American Dermatological Association, the Section on Dermatology and Syphilology of the American Medical Association, and the American Academy of Dermatology and Syphilology.

PURPOSES

The board has been established primarily to determine the competence of physicians who specialize in dermatology and syphilology. It will therefore establish minimum standards of education and training, examine applicants and certify properly qualified specialists in this field, prepare lists of those qualified and arrange for the publication of such lists. Because of its interest also in the fulfillment of these standards, it will attempt to stimulate the development of adequate training facilities, investigate institutions and individuals planning to train specialists, and lend its aid to the approval of those institutions and individuals offering adequate training in the specialty. The board, in addition, will always be glad to advise physicians desiring to enter this special field of medicine.

REQUIREMENTS FOR CERTIFICATION

I. General Requirements

1. High ethical and professional standing.
2. Graduation from a medical school of the United States or Canada recognized by the Council on Medical Education and Hospitals of the American Medical Association.
3. Satisfactory completion of an internship of not less than one year in a hospital approved by the same Council.
4. A license to practice medicine.
5. Membership in the American Medical Association or membership in a similar society recognized as having the same purpose as the American Medical Association.
6. Citizenship in the United States or citizenship—meaning native citizens—in Canada and Cuba.

II. Special Requirements

Applicants for certification by the board are classed in two groups as follows:

Group A consists of physicians who have limited their practice mainly to dermatology and syphilology for ten or more years, including a period of training satisfactory to the board. This group will, in all probability, be abolished in 1949.

Group B consists of physicians who have practiced dermatology and syphilology at least five years, including their period of training. For such physicians who will be examined up to Jan. 1, 1945, the board will require two years of full-time planned training in clinical dermatology including adequate instruction in the following subjects as related to the skin: histopathology, mycology, allergy and physics as related to physical therapy.

III. Future Special Requirements

For candidates beginning their training after Jan. 1, 1940, who will appear for examination subsequent to Jan. 1, 1945, additional requirements are effective in accordance with the program recommended to the various specialty boards by the Advisory Board for Medical Specialties. These minimum requirements of special training for admission to examination are as follows:

1. A period of study, after the internship, of not less than three years in clinics, dispensaries, hospitals or laboratories recognized by the Council on Medical Education and Hospitals of the American Medical Association and approved by the American Board of Dermatology and Syphilology as competent to provide a satisfactory training in dermatology and syphilology. This period of specialized training shall include:

(*a*) Graduate training in the basic medical sciences which are necessary to the proper understanding and treatment involved in this specialty.

Instruction in the following fundamental subjects as related to the skin is deemed advisable by the board: embryology, histology, chemistry, physiology, bacteriology, mycology, parasitology, pathology, immunology, serology, pharmacology and materia medica, and physics of physical therapy.

(*b*) An active experience of not less than eighteen months in hospitals, clinics, dispensaries or diagnostic laboratories recognized by the same Council and approved by the American Board of Dermatology and Syphilology as competent to provide an adequate preparation.

(*c*) Examinations, written and oral, in the clinical, laboratory and public health aspects of dermatology and syphilology.

2. An additional period of not less than two years of study and/or practice.

Therefore, for certification by this board, candidates beginning their training after Jan. 1, 1940 must plan for a three years course of systematic training.

APPLICATION AND FEE

The board desires to appraise the candidate's educational opportunities (premedical, medical and dermatologic), the character of the men under whom he has worked, his hospital and teaching positions, original investigations, contributions to dermatologic literature, membership in medical societies and local and general reputation.

For this purpose, application must be made on a special blank, which may be obtained from the secretary. No application will be considered unless made on the regular application blank. Applications should be filed early in order to obtain full advantage of the sets of histopathological slides which are available through the Army Medical Museum in Washington. The completed application should be sent, at least two months before the date of examination, to the secretary of the board, together with the required reprints, photographs and the fee of $35. This fee will not be returned, and no application will be considered until the fee is received. This fee has been carefully computed and is used entirely for administrative purposes. Members of the board do not receive any compensation except for actual expenses connected with holding the examinations.

Make checks payable to American Board of Dermatology and Syphilology, Inc.

EXAMINATIONS

Applicants classified in group B will be required to pass a written examination. This written examination on clinical and laboratory subjects including cutaneous pathology will be held simultaneously at stated intervals in different parts of the country, approximately two months before the oral examination.

Applicants classified in both groups A and B will be required to pass an oral, clinical and laboratory examination. This examination will be conducted in a clinic or hospital ward where individual cases will be discussed with each candidate as

well as various subjects related to the skin such as histopathology, mycology, allergy and physics of physical therapy. The board reserves the right to add to this list other subjects within the field of dermatology and syphilology.

Examinations are designed to test the candidate's fitness to practice dermatology and syphilology as a specialty. The board will try especially to ascertain the breadth of his clinical experience, his knowledge of recent literature of dermatology and syphilology and his general qualifications as a specialist in this branch of medicine.

Whenever an applicant fails to pass the examination, the board, if requested, will make suggestions as to suitable courses of instruction for the purpose of overcoming deficiencies in the applicant's knowledge of this specialty.

Except in special circumstances, applicants shall take the examination within the year following the filing of application and the deposit of the fee.

The oral examination will be held near the time and place of the annual meeting of the American Academy of Dermatology and Syphilology. This examination will be held only at the time of regular meetings of the boards.

REEXAMINATIONS

If the candidate fails or is "conditioned" in an examination he will be admitted to a second examination after one year, but within three years, and must give sixty days' notice of his intention to appear for reexamination. If a candidate who has failed or has been conditioned does not appear for reexamination before the expiration of three years, he will be required to make a new application and pay an additional fee of $35 before reexamination.

A candidate having failed twice must file a new application and pay an additional fee of $35.

CERTIFICATES

A certificate will be issued to each candidate who meets the requirements of the board, to the effect that the holder of the certificate has had adequate training in dermatology and syphilology and has successfully fulfilled the requirements of the board.

It is expected that medical schools, hospitals and physicians, as well as the lay public, will utilize the certificate from this board as a proof of adequate preparation in the field of dermatology and syphilology, and of fitness of candidates for positions under their control. For this purpose lists of those holding certificates from the board will be available for inspection and will be published from time to time in the Directory of Medical Specialists. Diplomates will be identified in the Directory of the American Medical Association.

A certificate granted by this board does not of itself confer or purport to confer, any degree, or legal qualifications, privileges, or license to practice dermatology or syphilology. The board does not intend to limit or interfere with the professional activity of any duly licensed physician. Its aim is to improve the standards of practice of dermatology and syphilology by encouraging improvement in the opportunities for and quality of training for specialists in this field of medicine, and to certify, as specialists those who voluntarily comply with the requirements of the board.

Upon the board rests the responsibility of determining the standards of knowledge to be acquired, while upon the candidate will always rest the responsibility of acquiring the knowledge to fulfill these standards.

Certificates will be issued only to physicians in the United States and its possessions, in Canada and in Cuba.

REVOCATION OF CERTIFICATES

The certificates issued by the board are issued subject to the provisions of the certificate of incorporation and of the by-laws, and each certificate is subject to revocation in the event that: (*a*) the issuance of such certificate or its receipt by the physician so certified shall have been contrary to any of the provisions of the certificate of incorporation or by-laws; or (*b*) the physician so certified shall not have been eligible to receive such certificate, irrespective of whether or not the facts constituting him so ineligible were known to or could have been ascertained by the directors of the board at the time of the issuance of such certificate; or (*c*) the physician so certified shall have made any misstatement of fact in his application for such certificate or in any other statement or representation to the board or its representatives; or (*d*) the physician so certified shall have been convicted by a court of competent jurisdiction of a felony or of any misdemeanor involving, in the opinion of the board of directors, moral turpitude in connection with his practice of medicine; or (*e*) the physician so certified shall have had his license to practice medicine revoked or shall have been disciplined or censored as a physician by any court or other body having proper jurisdiction and authority.

PUBLICATIONS OF THE BOARD

1. Booklet of Information.

2. Opportunities for Graduate and Postgraduate Students in Dermatology and Syphilology, containing a list of places where instruction may be obtained, and details about these places. (In preparation.)

3. The complete register of diplomates is published in the Directory of Medical Specialists, which can be obtained from the Columbia University Press, New York City. $5.00.

4. Syllabus of graduate training.

(*a*) To inform the student physician, intending to specialize, of the field to be covered in his preparation and the methods by which his preparation can be accomplished.

(*b*) To aid the medical schools and the dermatologic department of medical schools and hospitals by outlining the scope of teaching required for specification in dermatology and syphilology.

Further information may be obtained from the secretary-treasurer.

INSTRUCTIONS TO APPLICANTS

Fill out application blank in detail.

Enclose fee of $35. (Make checks payable to the American Board of Dermatology and Syphilology, Inc.)

Include photographs as directed on application blank.

Enclose reprint of each published paper, if possible.

Send completed applications and above items to the secretary.

Please indicate under No. 13 on the application blank as complete data as possible about your training in dermatology and syphilis. Indicate the month and year, if possible, or at least the number of months of the various parts of your training and also whether full time or part time. If part time indicate whether one-half day, six days a week or three days a week, etc. If dispensary service is considered as part of your training, please indicate details here as well as under No. 14.

In No. 16 indicate clearly when you limited your practice to dermatology and syphilis.

If your training and your practice overlap, please explain under No. 19.

ADDENDA

At a meeting of the board held in New Orleans early in 1941 it was decided:

1. If a candidate is called into active military or naval service he will receive full credit for dermatological training already finished at that time.

2. So far as counting as *training* in dermatology and syphilology any military or naval medical service, each case must of necessity be decided upon the evidence submitted in the case of each particular candidate.

3. The board accept not more than one year of military medical service as part of the required two years' *experience* in dermatology and syphilology to be eligible for examination.

4. A candidate who is called into military or naval service after completion of three years of training may take the complete examination of the board, and that if this examination is satisfactory a certificate will be issued after satisfactory completion of two years of further approved experience in dermatology and syphilology.

5. A candidate for a certificate may take the *written* examination at the next regular examination of the board after he has completed three full years of training.

AMERICAN BOARD OF INTERNAL MEDICINE, Inc.

ERNEST E. IRONS, Chairman, Chicago.
REGINALD FITZ, Vice Chairman, Boston.
WILLIAM S. MIDDLETON, Secretary-Treasurer, 1301 University Avenue, Madison, Wis.
DAVID P. BARR, St. Louis.
WILLIAM J. KERR, San Francisco.
WILLIAM S. McCANN, Rochester, N. Y.
JONATHAN F. MEAKINS, Montreal, Quebec.
JOHN H. MUSSER, New Orleans.
GEORGE GILL RICHARDS, Salt Lake City.

". . . the membership of the board shall be maintained at the ratio of five members from the American College of Physicians and four members from the Section on the Practice of Medicine of the American Medical Association and that at least three of the members of the board from the American

College of Physicians and two members of the board from the Section on the Practice of Medicine of the American Medical Association shall be of professorial rank in approved medical schools of the United States or Canada."

"Sec. 5, Art. 5, Articles of Incorporation."

HISTORY AND AUTHORITY FOR ORGANIZATION

The American College of Physicians, through its Board of Regents at the annual session in Philadelphia on April 30, 1935, adopted a resolution for the establishment, with the Section on the Practice of Medicine of the American Medical Association, of an "American Board for the Certification of Internists." This board to consist of nine members; six to be appointed by the American College of Physicians, and three by the Section on the Practice of Medicine of the American Medical Association.

At the annual meeting of the American Medical Association at Atlantic City, N. J., June 10-14, 1935, the Section on the Practice of Medicine adopted the following resolution: "Resolved, that a committee of three, including a chairman, be appointed by the chairman of the Section on the Practice of Medicine, to discuss with a committee from the American College of Physicians, ways and means by which an examining board, comparable to such boards already existing in certain specialties, may be set up for the purpose of certification of specialists in internal medicine.

President James Alexander Miller of the American College of Physicians appointed the following as representatives of the College on the joint committee: David P. Barr, St. Louis; Jonathan C. Meakins, Montreal; William S. Middleton, Madison; John H. Musser, New Orleans; O. H. Perry Pepper, Philadelphia; G. Gill Richards, Salt Lake City. William J. Kerr, Chairman of the Section on the Practice of Medicine of the American Medical Association, appointed Walter L. Bierring, Des Moines; Reginald Fitz, Boston, and Ernest E. Irons, Chicago, as representatives of that section. Walter L. Bierring was named as chairman of the joint committee.

The joint committee of nine members held its first meeting in Philadelphia Dec. 14, 1935. At this meeting a resolution was adopted to submit an application in due form to the Advisory Board for Medical Specialties requesting authority to organize the American Board of Internal Medicine and for admission to membership in the said advisory board. In the preliminary draft of the constitution and by-laws, the ratio of the representation on the board was changed to five members from the American College of Physicians and four members from the Section on the Practice of Medicine of the American Medical Association.

On Feb. 16, 1936 a subcommittee consisting of Walter L. Bierring, Reginald Fitz, Ernest E. Irons, Jonathan C. Meakins and William S. Middleton held a meeting in the Palmer House, Chicago, to formulate and complete the details of the application to be presented to the executive committee of the Advisory Board for Medical Specialties, which body approved the organization of the American Board of Internal Medicine and directed that articles of incorporation be completed and filed.

In keeping with the ratio of membership to be maintained on the American Board of Internal Medicine, James Alexander Miller, President, officially designated David P. Barr, Jonathan C. Meakins, William S. Middleton, O. H. Perry Pepper and G. Gill Richards as representatives from the American College of Physicians, and William J. Kerr, Chairman, designated Walter L. Bierring, Reginald Fitz, Ernest E. Irons and John H. Musser to represent the Section on the Practice of Medicine of the American Medical Association.

The articles of incorporation were filed for record with the county recorder of Polk County at Des Moines, Polk County, Iowa, Feb. 28, 1936.

At the annual session of the American College of Physicians, Detroit, March 1-6, 1936, the Board of Regents officially approved the American Board of Internal Medicine. On May 10, 1936 the Advisory Board for Medical Specialties, meeting in Kansas City, gave its final approval to the American Board of Internal Medicine, granting at the same time admission to membership in the Advisory Board for Medical Specialties.

The Council on Medical Education and Hospitals of the American Medical Association approved the board at its meeting May 12, 1936. The Section on the Practice of Medicine of the American Medical Association gave its final approval May 13, 1936. The first meeting of the board was held at the Palmer House, Chicago, June 14-15, 1936.

Subspecialty certification was authorized by the Advisory Board for Medical Specialties and the Council on Medical Education and Hospitals of the American Medical Association, Feb. 16, 1941. The mechanism for instrumenting this program has been perfected through the cooperation of advisory committees in allergy, cardiovascular disease, gastroenterology and tuberculosis.

PURPOSE

1. To improve the standards of practice and the quality of service in the field of internal medicine.

2. To determine the eligibility of candidates who request admission to examination in accordance with regulations published herein.

3. To conduct examinations of eligible candidates who seek qualification by this board.

4. To issue certificates of qualification to all those meeting the requirements of the board.

5. To aid in improving the educational opportunities for the training of internists.

6. To administer the regulations which pertain to certification in the medical subspecialties referred to herein.

VALUE OF CERTIFICATION

1. Evidence of special training in the broader aspects of the field of internal medicine and recognition of qualifications for the practice of internal medicine as a specialty.

2. A requirement for admission to Fellowship in the American College of Physicians.

QUALIFICATIONS OF CANDIDATES

Each applicant for admission to the examination shall be required to present evidence that he has met the following standards:

1. GENERAL.

A. Satisfactory moral and ethical standing in the profession.

B. Membership in the American Medical Association or, by courtesy, membership in such Canadian or other medical society or societies as are recognized for this purpose by the Council on Medical Education and Hospitals of the American Medical Association. Except as here provided, membership in other societies shall not be required.

2. PROFESSIONAL.

A. Graduation from a medical school of the United States or Canada approved by the Council on Medical Education and Hospitals of the American Medical Association.

B. Completion of an internship of not less than one year in a hospital approved by the same council.

C. In the case of an applicant whose training has been received outside of the United States and Canada, his credentials must be satisfactory to the aforenamed council and the Advisory Board for Medical Specialties.

3. SPECIAL TRAINING.

A minimum of five years must elapse after completion of a year of internship in a hospital approved for intern training before the candidate is eligible for admission to an examination.

A. Three years of this period must be devoted to special training in internal medicine. This requirement should include a period of at least several months of graduate work under proper supervision in anatomy, physiology, biochemistry, pathology, bacteriology or pharmacology, particularly as related to the practice of internal medicine. This work may be carried on in any domestic or foreign medical school or laboratory recognized by the Council on Medical Education and Hospitals of the American Medical Association as offering appropriate facilities for this type of postgraduate training; or it may include a period of at least two years of graduate work under proper supervision in internal medicine or in its restricted and specialized branches in any domestic or foreign hospital, clinic or dispensary, or under the immediate preceptorship of an internist recognized by the board as offering appropriate facilities for this type of postgraduate experience.

B. A period of not less than two years of special practice in the field of internal medicine or in its more restricted and specialized branches.

MEMORANDUM FOR THE GUIDANCE OF CANDIDATES

The American Board of Internal Medicine does not propose to establish fixed rules for the preliminary training of candidates for certification in this field. Broad general principles for training, however, may be outlined, although such suggestions as are made must of necessity be subject to constant changes reflecting the dynamic nature of the specialty.

1. A sound knowledge of physiology, biochemistry, pharmacology, anatomy, bacteriology and pathology in so far as they apply to disease is essential for continued progress of the individual who practices internal medicine. Such knowledge may be obtained in a number of ways:

A. By properly arranged and supervised graduate courses;

B. By the opportunities for study afforded by the appointment to a junior position in a department of physiology, biochemistry, pathology, etc. (see above) with attendance upon advanced lectures in the other subjects;

C. By advanced study in these subjects while an intern or resident medical officer, and by the application of the principles involved to patients under one's control;

D. By the detailed study, under supervision, of a problem or topic in medicine in which the student brings the basic facts of physiology, pathology, etc., into direct relation with the concrete clinical problem. The analysis of a problem with detailed knowledge of its fundamental pathologic or physiologic background does much to stimulate thoroughness, clear thinking and progress.

2. A portion of the written examination is designed to test the candidate's knowledge in these "preclinical" subjects and especially in their application to disease rather than their purely laboratory aspects.

3. The mere factual knowledge of medicine and its basic sciences is not sufficient. The candidate must have had training in their use in furthering his understanding in clinical medicine. This implies practical experience under the guidance of older men who bring to their clinical problems ripe knowledge and critical judgment. Preparation to meet this requirement adequately may be even more difficult to obtain than the so-called scientific training. It may, however, be acquired in the following ways:

A. By work in a well organized hospital outdoor clinic conducted by competent physicians;

B. By a prolonged period of resident hospital appointments likewise directed by skilled physicians;

C. By a period of training in intimate association with a well trained and critical physician who takes the trouble to teach and guide his assistant rather than to expect him only to carry out the minor drudgery of a busy practice.

4. The board does not consider it to the best interests of internal medicine in this country that rigid rules be formulated as to where or how the training outlined above is to be obtained. Medical teaching and knowledge are international. The opportunities of all prospective candidates are not the same. Some may have the opportunity of widening their knowledge by a period of study abroad. Others, at the other extreme, may be restricted to a comparatively narrow geographic area and their more detailed training must be obtained in short periods of good study scattered over a longer time. Although it is required that at least five years must elapse between the termination of the first intern year and the date when the candidate is eligible to take the examination, a longer period is advisable. The board wishes to emphasize that time and training are but a means to the end of acquiring a broadness and depth of knowledge of internal medicine which the candidate must demonstrate to the board in order to justify it in certifying that he is competent to practice internal medicine as a specialty. The responsibility of acquiring the knowledge as best he may rests with the candidate, while the responsibility of maintaining the standard of knowledge required for certification devolves on the board.

5. Applicants who graduated before the foundation of the American Board of Internal Medicine in 1936 will not be held to the strict interpretation of the published requirements in formal graduate training. Under such circumstances the board will accept the results of the examination as evidence of the qualifications for certification.

6. The board will recognize one year of basic science training which leads to a *higher degree* in the basic sciences, as one year of formal graduate training, whether taken previous to or subsequent to the first year of internship.

7. The board will recognize a second year of internship which is confined strictly to internal medicine as one year of the graduate training period.

8. The board will recognize one year of training in pediatrics, neurology or any medical subspecialty as one year of the graduate training period of three years as published herein.

9. In all instances the board will require a minimum of two years training in internal medicine.

10. In the current emergency the board will allow one year of military service in the United States Army, Navy, or Marine Corps to be applied toward the satisfaction of one year of graduate training, or one year of the practice of the specialty of internal medicine. This ruling admits of a substitution of military or naval service for only one year of the three years of graduate training, or one year of the two years of the practice of internal medicine as outlined in the published qualifications for admission to the examination of this board.

METHOD OF EXAMINATION

The examination required of candidates for certification as specialists in internal medicine will comprise Part I (written), and Part II (practical or clinical).

Part I. The written examination is to be held simultaneously in different sections of the United States and Canada on the third Monday of February and October of each year. This examination will be divided into a morning and an afternoon session of three hours each, and the two sessions A and B will include the following:

A. Question in applied physiology, anatomy, physiological chemistry, pathology, bacteriology and pharmacology as related to internal medicine as well as the cultural aspects of medicine.

B. Questions in general internal medicine.

The location of the written examination is determined by the number of candidates from any given area. In all instances, however, the board will make every effort to meet the convenience of all concerned with a minimum of expense and time.

All candidates must successfully pass the written examination before being admitted to the oral examination.

Part II. Candidates successful in the written tests will be eligible for the practical or clinical examination, which will be conducted by the members of the board near the time and place of the annual meeting of the American College of Physicians and of the American Medical Association and at such other times and places as the board may designate. This examination is conducted at the bedside, and each candidate will be assigned one or more patients in the hospital.

REEXAMINATIONS

1. Any candidate unsuccessful in the written examination may upon request repeat the examination after a period of two years. No additional fee is required for this examination. Any candidate unsuccessful in a second written examination may upon request repeat the examination after a further period of two years. A fee of $10 is required for admission to a third written examination.

2. Any candidates unsuccessful in the oral examination may upon request repeat the examination after a period of one year. The period of one year is construed as the interval between annual meetings of the American College of Physicians or annual meetings of the American Medical Association. No additional fee is required for this examination. Candidates unsuccessful in the second oral examination may, upon request, repeat the examination after a period of two more years. A fee of $10 is required for admission to the third oral examination.

APPLICATION

Candidates for examination shall make their application on a prescribed form which may be obtained from the office of the secretary-treasurer.

The application shall contain a record of the candidate's premedical and medical training as well as of internships, graduate study, hospital or dispensary staff appointments, teaching positions, membership in medical societies, medical papers published and the names of two well known internists to whom the board may refer for professional and character reference.

The application shall also be accompanied by one recent signed photograph mounted on the application, and the registration and examination fee of $40, which fee will cover both the written and practical examinations. An additional fee of $10 will be required when the certificate is issued.

CERTIFICATES

The certificate issued by the American Board of Internal Medicine shall be in such form as to comply with the articles of incorporation and the by-laws and shall be signed by the officers and members of the board, and shall bear the official seal of the board.

Certificates of the board will be issued to candidates who have satisfactorily completed the written and practical examinations, and been found qualified by the board to practice the specialty of internal medicine.

Subspecialty certification will be designated on the certificate.

CERTIFICATION IN MEDICAL SUBSPECIALTIES

In association with the advisory committees in allergy, cardiovascular disease, gastroenterology and tuberculosis, the American Board of Internal Medicine will:

1. Certify without examination candidates who have been certified by this board and who have been recommended by the advisory committee of the sub-specialty concerned for certification without examination.

2. Admit to further examination and certify if qualified, candidates who have been certified by this board and who have been recommended by the advisory committee of the sub-specialty concerned as eligible for admission to the examination.

3. Examinations for certification in the sub-specialties indicated will be conducted by guest examiners, nominated by the advisory committee concerned and selected by the American Board of Internal Medicine, at the time and place of the regular board examinations. A fee of $10 is required to meet the expense of this examination.

4. Candidates who have not been certified by the American Board of Internal Medicine are ineligible for admission to examination in any sub-specialty.

The American Board of Internal Medicine and members of advisory committees in the sub-specialties referred to herein, recognize the value of a broad general training in internal medicine before attempting to qualify in a sub-specialty of medicine. It is, therefore, agreed that all candidates shall first be certified by the American Board of Internal Medicine as a prerequisite for certification in a sub-specialty.

REVOCATION OF CERTIFICATES

The American Board of Internal Medicine shall have the sole power, jurisdiction and right to determine and decide whether or not the evidence or information placed before it is sufficient to constitute grounds for revocation of any certificate issued by this board, and the decision of the board in the premises shall be final.

All official correspondence should be addressed to the secretary-treasurer.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY, Inc.

WALTER T. DANNREUTHER, President, New York.
JOSEPH L. BAER, Vice President, Chicago.
LOUIS E. PHANEUF, Vice President, Boston.
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WILLARD R. COOKE, Galveston, Tex.

ORGANIZATION

In 1930 the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons, the American Gynecological Society, and the Section on Obstetrics and Gynecology of the American Medical Association, each elected three Fellows to constitute the American Board of Obstetrics and Gynecology.

Dr. Walter T. Dannreuther of New York, Dr. Paul Titus of Pittsburgh and Dr. Grandison D. Royston of St. Louis were appointed to represent the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons; Dr. Jennings C. Litzenberg of Minneapolis, Dr. Joseph L. Baer of Chicago, and Dr. E. A. Schumann of Philadelphia were appointed to represent the American Gynecological Society; Dr. Fred L. Adair of Chicago, Dr. R. D. Mussey of Rochester, Minn., and Dr. E. D. Plass of Iowa City were appointed to represent the Section on Obstetrics and Gynecology of the American Medical Association. Since formation of the board several of the original members have resigned and others have been duly appointed to fill their places.

The board was incorporated and organized and held its first meeting in September 1930. At that time the By-Laws were adopted and provision was made by resolutions for its proper functioning.

This board had been in the process of organization since 1927 and put into action a determined effort on the part of these three national organizations to improve the standards of practice of obstetrics and gynecology.

Experienced practitioners of the specialty have been required to undergo a practical clinical examination, whereas a younger group has had both a written and clinical examination and was required also to submit reports of a group of cases in order to qualify for certification.

After the 1942 examinations, no such distinction will be made, and all applicants will be obliged to fulfill all of the requirements, including the written examination in obstetrics and gynecology and submission of case records, as well as the general oral-clinical and pathological examination in obstetrics and gynecology.

PURPOSES

First. To elevate the standards and advance the cause of obstetrics and gynecology.

Second. To determine the competence of practitioners professing to be specialists in obstetrics and gynecology.

Third. To arrange, control and conduct examinations to test the qualifications of voluntary candidates appearing before the board for certification as specialists in obstetrics and gynecology.

Fourth. To grant and issue certificates of qualification as specialists in the field of obstetrics and gynecology to candidates successful in demonstrating their proficiency.

Fifth. To serve the public, hospitals and the medical schools by preparing lists of specialists certified by the board.

These activities proceed from the certificate of incorporation in which it is stated that "the nature of the business and the objects or purposes proposed to be transacted, promoted and carried on by it" are as follows:

"To encourage the study, improve the practice, and advance the cause of obstetrics and gynecology, subjects which should be inseparably interwoven; and to grant and to issue to physicians duly licensed by law, certificates or other equivalent recognition of special knowledge in obstetrics and gynecology."

NO DEGREES OR LEGAL RESTRICTIONS

Each certificate granted or issued does not of itself confer or purport to confer upon any person any degree or legal qualifications, privileges or license to practice obstetrics or gynecology, nor does the board intend in any way to interfere with or limit the professional activities of any duly licensed physician. Its chief aim is to standardize qualification for specialists in obstetrics and gynecology, and to certify as specialists those who voluntarily appear before the board for such recognition and certification, according to its regulations and requirements.

VALUE OF CERTIFICATE

The national obstetrical and gynecological organizations, which have participated in the formation of the board and are sponsoring its activities, as well as other societies, attach considerable importance to its certificate. Both the medical and the lay public, including hospital directors, have come to utilize the certificate from this board freely as a means of determining who are well grounded as specialists in obstetrics and gynecology.

Lists of those holding certificates from this board who are limiting their practice to obstetrics and gynecology are published in the Directory of Medical Specialists; similar lists are published by the *American Journal of Obstetrics and Gynecology*, and also appear in the *American Medical Directory*. This latter indicates diplomates of this and other boards by means of numerical symbols appearing in the biographic records.

A joint directory of specialists certified by the fifteen major special boards was published in 1940 by the Advisory Board for Medical Specialties, and a new edition appears again in 1942. This board holds active membership in the Advisory Board for Medical Specialties.

This board, in cooperation with the Council on Medical Education and Hospitals of the American Medical Association, is conducting a survey of institutions providing acceptable residencies and internships in obstetrics and gynecology.

PREREQUISITES TO ELIGIBILITY

Each applicant before he shall become eligible to receive such certificate or other evidence of recognition:

1. Must have had conferred upon him a degree in medicine by an institution of learning approved by the Advisory Board for Medical Specialties and the Council on Medical Education and Hospitals of the American Medical Association.

2. Must establish in a manner satisfactory to the board of directors that he is a physician duly licensed to practice medicine.

a. That he is of high ethical and professional standing.

b. That he has received adequate training in obstetrics and gynecology as a specialty.

Each candidate should have certain fundamental knowledge of the basic essentials of anatomy, pathology, bacteriology, physiology, pharmacology, and therapeutics as related to the

practice of obstetrics and gynecology. Clinical training should consist, subsequent to graduation, of at least one year's general rotating internship, and thereafter a special residency in obstetrics and gynecology for a period of at least three (3) years, not necessarily consecutive. The board accepts the fifth or "intern" medical school year required at some schools in lieu of the usual fifth or intern "clinical training" year following graduation. As a substitute for special training, service with a qualified obstetrician-gynecologist preceptor, preferably one who has been certified by the board, may be acceptable. The exact time basis for this has not been specified, and each case must be reviewed and decided individually by the credentials committee after the application is submitted in the regular manner. The time allowance for this type of training will vary with the amount of work done with the preceptor. Opportunity for personal responsibility during this period of training is highly desirable. At least a fundamental knowledge of both obstetrics and gynecology is essential regardless of whether a candidate's practice is limited to one or the other branch. As heretofore, all candidates will be required to stand examination in both branches of the specialty, regardless of the fact that the major part of their practice may be in one or the other branch of the specialty.

An applicant entering military service in the present national emergency and assigned to work in general surgery under conditions satisfactory to the credentials committee may receive credit toward the required special training up to a maximum of six (6) months, applicable toward his three years of special training. Emergency military service may be counted as years of practice.

3. Must make application for investigation of his credentials and a survey of his character.

4. Must assure the board that he is limiting his practice to obstetrics and/or gynecology and that he intends to continue to do so having limited for at least six (6) months before making application.

This board deprecates engagement in other fields of practice than that in which candidates profess to be specialists. The board does not exclude from examination, however, obstetricians or gynecologists who practice abdominal surgery and urology in the female, as well as breast surgery, because of the correlation of these activities.

The board has ruled that physicians who accept male patients in their private or other practice, for operative or other care, cannot be regarded as specialists in obstetrics and gynecology. Special certifying boards in general surgery and internal medicine have been organized and such individuals should apply to these boards.

5. Must have membership in the American Medical Association, or membership in such Canadian or other medical societies as are recognized for this purpose by the Council on Medical Education and Hospitals of the American Medical Association.

6. Must be a citizen of the United States or Canada.

This board will not certify a candidate who is not a citizen of the United States or Canada, though he be a resident of either country. Former citizens of other countries must have taken out at least first papers for citizenship and must have been certified by either the National Board of Medical Examiners or licensed to practice medicine in the United States or Canada by a state or provincial board of licensure; and further, there will be required a probationary period of at least three (3) years from the date of licensure in the practice of medicine in these countries before such a candidate may be admitted to examination.

APPLICATION AND FEES

Application must be made on a special blank which will be furnished by the secretary's office, 1015 Highland Building, Pittsburgh, Pa., and must be forwarded with the other required credentials and the application fee to the secretary's office. The secretary cannot make any eligibility rulings. These are made only by the credentials committee after reviewing the candidate's formal application, which must be completely filled out and previously filed with the secretary.

Application fee.....$15.00

Make checks payable to American Board of Obstetrics and Gynecology.

(Applications will not be considered for classification and action by the credentials committee unless accompanied by the application fee, which is not returnable.)

Applications and application fees must be in the office of the secretary at least ninety (90) days prior to the scheduled date of the examinations.

Applicants who fail to exercise the examination privilege within three (3) years of the date of filing the application are required to file a new application and to pay a new application fee.

Examination fee.....$85.00

(Payable when the candidate is notified of acceptance for examination. Not returnable after the candidate has been officially accepted by the credentials committee and notified to report for examination, except if the candidate is prevented from appearing for examination because of induction into military service.)

Applicants declared ineligible for admission to examination may reopen their applications within one (1) year of the filing date without payment of an additional application fee.

Total fee.....$100.00

The fees have been carefully computed on a basis of cost of examinations and are used entirely for administrative expenses. Examiners serve without compensation other than actual expenses.

ABOLISHMENT OF SENIOR AND JUNIOR (A AND B) GROUP CLASSIFICATIONS

Effective March 1, 1942 the requirements for all candidates will be uniform, as follows:

1. Completion of at least one year in a general rotating intern service in a hospital approved by the Council on Medical Education and Hospitals of the American Medical Association.

(A second year general internship is to be considered as one of a candidate's years of practice. No credit will be given toward special training during a second year general internship.)

2. A minimum of seven (7) years of practice after the intern year, including at least three (3) years of special training in obstetrics and/or gynecology satisfactory to the board of directors.

3. Limitation of practice to obstetrics and/or gynecology. The candidate's practice must have been so limited for a period of at least six (6) months prior to the date of making application.

(Emergency military service or any other similar patriotic service, such as work with Selective Service boards, etc., will not be construed as nonlimitation of practice in violation of the board regulations.)

EXAMINATIONS

Applicants not qualifying before the 1942 examinations, as well as those who have previously applied and been accepted but have failed to appear for examination, and also those previously examined and failed will be subject to the new plan of general grouping and uniform examination after the final examination in June 1942.

Candidates accepted for examination after this year's class will be required to attain a passing grade in both a written examination and a review of case records (Part I), before becoming eligible for the oral clinical, and pathological examination (Part II).

Part I examinations are scheduled annually for the first Saturday of January. Application on an official application form, for admission to this examination must be filed in the office of the secretary with the application fee of fifteen dollars ($15) at least ninety (90) days prior to this date. Grades cannot be mailed from the secretary's office until about March 15.

Arrangements will be made for candidates to report in any convenient city where there may be a diplomate of this board to conduct or supervise the written examination sent out under sealed cover from the board's office.

Applicants have three years from date of filing to appear for examination. After that time a new application with its fee is required.

Examination consists of:

1. A comprehensive written examination, given once yearly, including questions on both obstetrics and gynecology, as evidence of a fundamental knowledge of both branches is required of all candidates.

2. The filing of twenty-five (25) case reports in abstract form, to be presented by each candidate with the written examination paper to the local examiner, at the annual Part I examination. These must be of cases for which the candidate was personally responsible.

(The regulations regarding case records are newly revised ones, both in respect to reduction in number from fifty to twenty-five and to their preparation in abtract rather than in complete detail. For specific instructions regarding these new regulations see "Case Reports.")

No candidate is eligible for the general oral clinical, and pathological examinations (Part II) until he has passed the written portion and his case reports have been found satisfactory. The passing grade for the written examination and case reports is 75 per cent, and a candidate whose grade in either or both falls below 75 per cent is conditioned. Either or both of these conditions must be removed before the candidate is eligible for Part II.

Reexamination for the removal of conditions in Part I may be taken at any regular Part I examination after one year but within three years after the first failure without payment of an additional fee.

Candidates who successfully complete the Part I examination proceed automatically to the Part II examination held later in the year.

Part II. The general oral clinical, and pathological examinations given all candidates are conducted by the entire board and the assistant examiners near the time and place of the annual meeting of one or more of the national societies represented on this board, usually that of the American Medical Association.

Examination consists of:

1. Oral examination before from two to four examiners. An endeavor is made to adapt the details of the oral examination to each candidate's experience and practice, and the examination is particularly directed to ascertain his familiarity with recent obstetrical and gynecological literature, the breadth of his clinical experience, and his general qualifications as a specialist in obstetrics and gynecology.

2. Pathology examination. The candidate is expected to identify and discuss several obstetrical and gynecological pathologic specimens and histologic sections.

As heretofore, all candidates will be required to stand examination in both branches of the specialty, regardless of the fact that the major part of their practice may be in one or the other branch of the specialty.

Examiners report orally upon each candidate to the assembled board, after which the results of their examinations are considered jointly by the entire board and assistant examiners. After a general consideration of the details of the candidate's oral and pathology examinations, including a review of his capability and general adaptability, the candidate is passed or failed by the entire board. No conditions are given in Part II of the examination. When a candidate fails in Part II of the examination, he is not required to repeat Part I, but to take a reexamination in the oral clinical, and pathological portions only. Reexamination may be taken within three (3) years of the original examination or first failure without payment of an additional fee.

CASE REPORTS

Particular attention is directed to this section, because of the new requirements regarding case records which go into effect in 1942.

Twenty-five (25) reports of operative obstetrical and gynecological cases are required. Nonoperative cases are not acceptable.

These reports must be of cases treated within four (4) years of the date of the candidate's application. The number of cases from one's residency service should not be more than half the total number.

The group of reports must include a variety of material rather than a number of cases of one type.

These reports should be prepared in abstract form in line with the following items:

1. Hospital admission number and date, with identifying initials, or name, of each patient, and name of operator (candidate), at the top of the page.

2. (*a*) Preoperative diagnosis, and basis for this, in brief.
(*b*) Postoperative diagnosis, based on findings.

3. Nature of operation, omitting descriptive technical details, but including pathologist's findings on tissue removed.

4. Critical summary or analysis of cases, with critical deductions derived from correctness or incorrectness of diagnosis, operative findings, postoperative course, and from final results on discharges from hospital and at six months "follow-up" examination.

5. Two (2) separate index lists must accompany these reports, including name of hospital, admission manner, dates, identifying initials, or name of all twenty-five patients, with verifications of these and of the fact that the candidate was the operator, duly attested by the hospital superintendent or the medical director. The candidate's name must appear at the head of these lists.

Preparation of Reports. These are not to be copied verbatim from hospital records, but must be sufficiently complete so that the examiner can evaluate the judgment of the candidate in his choice of procedure.

Each report must include the items listed above, and again below:

1. Heading each separate case report must be the hospital number, name of the hospital at which the patient was operated upon, with all pertinent dates, together with the candidate's name.

2. Histories must be typewritten on standard size paper, 8½ by 11 inches.

3. Must be assembled by individual cases.

4. Must not be bound with any form of binding other than light weight paper folders or covers.

Obstetrical case reports should show:

1. Date of first prenatal visit and any special features bearing on the case.

2. The weight and condition of the child at birth and at time of discharge from the hospital.

Obstetrical reports which omit measurements of the pelvis inlet and outlet will be considered incomplete.

A final statement must be prepared for each case and must include:

1. An account of the candidate's personal observations of the case both prior to and subsequent to operation.

2. The basis for the diagnosis.

3. The facts that determined the course of treatment.

4. Critical conclusions to be drawn from the outcome of the case.

Case reports which do not include such discussion and comments will not be reviewed or graded by the examiners.

Two (2) complete index lists of these reports must accompany the records.

Separate lists must be made for each individual hospital at which operations were performed. These must state:

Candidate's name at head of each page.
Name and address of the hospital.
Patient's name.
Patient's admission number.
Date of admission.
Date of operation.
Date of discharge.

Lists must be verified by the superintendent or by the medical director, of each individual hospital from which the reports come. All verifications must be formally signed by the responsible hospital official.

Case reports submitted should be of patients treated within four (4) years of the date of the candidate's application.

The final action of the board is based upon the candidate's professional record, training and attainments, as well as on the results of his formal examination.

REVOCATION OF CERTIFICATES

Each Certificate of Qualification may be revoked by this board in the event that:

1. Any representation or statement made to the board or to any of its representatives by the physician so certified, including the statements contained in his application for certification, shall have been false or intentionally misleading.

2. The physician so certified shall not *in fact* have been eligible to receive certification, irrespective of whether or not the facts constituting such ineligibility were known to or could have been ascertained by this board, its members, directors, examiners, officers, or agents at or before the time of issuance of such Certificate of Qualification.

3. Any rule governing examination for certification shall have been violated by the physician so certified and the fact of such violation shall not have been ascertained until after the issuance of the Certificate of Qualification.

4. The physician so certified shall fail to abide by the regulations governing the limitation of his practice to the specialty as hereinabove defined.

5. The physician so certified shall violate the standards of ethical practice of medicine then accepted by organized medicine in the locality in which he shall be practicing and, without limitation of the foregoing, the forfeiture, revocation or suspension of his license to practice medicine, or the expulsion from, or suspension from the rights and privileges of membership in, the American Medical Association or any state or county society affiliated therewith, any recognized Canadian medical society, the American Association of Obstetricians and Gynecologists and Abdominal Surgeons or the American Gynecological Society shall be conclusive evidence of a violation of such standards of ethical practice of medicine.

6. The physician so certified shall fail to comply with or violate, or the issuance or receipt by him of such Certificate of Qualification shall have been contrary to or in violation of, the Certificate of Incorporation, the By-Laws or the Rules and Regulations of this board.

Upon revocation of any Certificate of Qualification by this board as aforesaid, the holder thereof shall return his Certificate of Qualification and all other evidence of certification to the secretary of the board and his name shall be removed from the list of diplomates or certificate holders by this board.

Make checks payable to the American Board of Obstetrics and Gynecology. Communications should be addressed to the secretary-treasurer.

SUPPLEMENT

GROUP CLASSIFICATION EFFECTIVE UNTIL MARCH 1, 1942

Classification of candidates in Groups A and B will continue in effect for and until the 1942 examinations under former existing regulations. Following that time new regulations finally adopted by the board at its 1941 meeting will be in force.

Group A consists of those who have limited their practice to obstetrics and/or gynecology for a period of ten years or more, having had adequate special training following a one year general internship.

Applications for this group will be accepted until March 1, 1942, or ninety (90) days prior to the annual general examination in June 1942.

Group B consists of those who have had:

1. At least one year of intern service in a hospital approved by the Council on Medical Education and Hospitals of the American Medical Association. A second year internship is to be considered as one of a candidate's years of practice. No credit will be given toward special training during a second year general internship.

2. Five years or more practice thereafter, including at least three years of special training in obstetrics and/or gynecology satisfactory to the Board of Directors.

3. Who have been limiting their practice to obstetrics and/or gynecology for at least six months prior to filing an application.

Opportunity for personal responsibility during this period of training is highly desirable.

Application for Group B will be accepted until Oct. 1, 1941, or until ninety (90) days prior to the scheduled date for the written examination and submission of case records, namely Jan. 3, 1942.

An applicant entering military service during the present national emergency and who is assigned to general surgery under conditions satisfactory to the Credentials Committee shall receive credit toward the required special training up to a maximum of six (6) months applicable toward his three years of special training.

EXAMINATION DETAILS

Applicants who qualify under Group A shall be required to undergo and pass a practical oral clinical and laboratory examination, including obstetrical and gynecological pathology. (After March 1, 1942 case records and written examinations will also be required as at present for Group B.) As heretofore, all candidates will be required to stand examination in both branches of the specialty, regardless of the fact that the major part of their practice may be in one or the other branch of the specialty.

Applicants who qualify under Group B shall be required to take and pass a written clinical and laboratory examination in obstetrics and gynecology, including, obstetrical and gynecological pathology, as well as the general oral clinical examination. Each candidate shall submit fifty (50) typewritten case records of major pathological obstetrical and/or gynecological cases with or without operative procedures. In both obstetrical and gynecological case histories not more than ten (10) major selected nonoperative cases may be included.

When pathological tissue is removed, adequate gross and microscopic descriptions are required. The candidate and the pathologist are required to employ the accepted nomenclature in the classification of gross and microscopic reports of pathological findings.

It is preferable that case records submitted be of patients treated within four (4) years of the date of the candidate's application. It is preferable also that the number of residency cases submitted should not be more than half (25) of the total number of fifty (50) cases required.

CASE RECORDS

Case histories need not be copied verbatim from the hospital records, but must be sufficiently complete so that the examiner can determine the diagnosis of existing conditions and evaluate the judgment of the candidate in his choice of procedure. Each history must give the hospital number and name of the hospital at which the patient was treated or operated upon, together with all pertinent dates. Histories must be typewritten on standard size paper, 8½ by 11 inches, assembled by individual cases, and submitted without any form of binding other than light weight paper folders. The following data should be as complete as possible: essential diagnosis, and in operative cases preoperative diagnosis; ample summary of operative procedure; clinical and pathological diagnosis; summary of postoperative course with special reference to morbidity; findings at time of discharge from hospital and at six months "follow-up."

The obstetrical case reports should show the date of the first prenatal visit and any special features bearing on the case. The examination of obstetric patients should include a routine serologic test for syphilis; also blood grouping or typing should be noted on histories of patients requiring transfusions. The weight and condition of the child at birth and at the time of discharge from the hospital should be shown on the obstetric history.

A final statement must be prepared for each case, to include an account of the candidate's personal observations of the case both prior to and subsequent to operation. These data must include:

1. The basis for the diagnosis.
2. The facts that determined the course of the treatment.
3. Critical conclusions to be drawn from the outcome of the case.

Case reports which do not include such discussion and comments will not be reviewed by the examiners. Obstetrical histories which omit measurements of the pelvic inlet and outlet will be considered incomplete.

The group of histories must include a variety of material rather than a number of cases of one type. The histories should be sufficiently detailed so that the examining board, after a careful reading of the reports, will be able to answer the following questions:

1. Is the diagnosis warranted by the recorded data?
2. If not, how lacking?
3. Are the indications for operation clearly stated?
4. Is the technic satisfactorily described?
5. Do the results justify the procedure?
6. Do the conclusions drawn indicate a grasp of the subject?

Only those reports which carry the candidate's personal deductions, conclusions and comments will be credited toward the fifty, and these reports must be diversified. Case reports which do not conform to board regulations will not be graded.

Note: Two (2) complete index lists of these cases must accompany the reports. Separate lists should be made for each individual hospital at which operations were performed. These lists must state the candidate's name at the head of each page, the name and address of the hospital, the name of the patient, admission number, date of admission, date of operation, and date of discharge. The candidate must have these lists verified by the superintendent, or the medical director of each individual hospital from which these case reports come. All verifications must be formally signed by the responsible hospital official.

Case histories are to be presented with the completed examination paper to the examiner conducting the written examination. They are not to be sent by the candidate to the secretary.

The final action of the board is based upon the candidate's professional record, training and attainments, as well as on the results of his formal examination.

Group B candidates cannot be notified of the results of their written examination and review of case reports until about March 15.

AMERICAN BOARD OF OPHTHALMOLOGY

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ORIGIN, AIMS AND METHODS

In 1913 the American Ophthalmological Society, the Section on Ophthalmology of the American Medical Association, and the American Academy of Ophthalmology and Otolaryngology appointed committees to report on ophthalmic education.

In 1914 these committees recommended that medical schools of the first class establish graduate courses in ophthalmology leading to an appropriate degree, and that these courses should represent not less than two years of systematic work subsequent to taking the degree of Doctor of Medicine. There was unanimous agreement as to the need of systematized and standardized training of those who are to practice ophthalmology, but it was clear that, in the near future, the number who would take the complete course leading to such a degree would be small. Moreover, such a course would not solve the problem of differentiating, in some degree, between the competent and the incompetent among those now in practice in ophthalmology. The committees were continued and, in 1915, they made further recommendations, as a result of which a joint board was created consisting of three representatives from each of the three special societies.

In 1916, after much preliminary work, this board was organized as the American Board for Ophthalmic Examinations (later changed to "American Board of Ophthalmology"). It was incorporated May 3, 1917.

In 1934 the plan of organization was changed so that each component society elects four members, instead of three, to form the board. The members of this board are chosen in the same manner as the presiding officers of these societies are chosen. One is elected each year by each of the societies represented on the board, to serve for four years.

As other specialties formed boards similar to the American Board of Ophthalmology the need for some supervising and coordinating control led to action by the American Medical Association in 1933 authorizing the Council on Medical Education and Hospitals: (1) to formulate standards of administration, based on those of the American Board of Ophthalmology, of Otolaryngology, of Gynecology and Obstetrics, and of Dermatology and Syphilology; and (2) to recognize officially new boards meeting these standards.

The Constitution of the Advisory Board for Medical Specialties which was organized in 1934 states that: "This board shall act in an advisory capacity to such organizations as may seek its advice concerning the coordination of the education and certification of medical specialists."

CHIEF FUNCTIONS

1. To establish standards of fitness to practice ophthalmology cooperating with hospitals and graduate schools of medicine.

2. To arrange and conduct examinations to test the qualifications of those who practice ophthalmology, and to confer certificates upon those who meet the standards established by the board.

3. To act as preceptors for prospective students of ophthalmology.

NO DEGREES

The conferring of a degree is left to the universities, where it belongs, and the board makes no attempt to control the practice of ophthalmology by any license or legal regulation whatever. It simply aims to establish a standard of fitness to practice ophthalmology, and to certificate any who, voluntarily, apply and satisfy the board of their qualifications.

The following is the wording of the present certificate:

The American Board of Ophthalmology hereby certifies that .....*(name)*..... has pursued an accepted course of graduate study and clinical work, and has successfully passed the examination in ophthalmology conducted under the authority of this Board.

Date.....

Signatures of members of the Board

Many special eye hospitals as well as general hospitals in all parts of the country require the certificate for appointment or promotion on their staffs. In addition, many societies now require the certificate as a prerequisite for membership.

The number of institutions and societies which require the certificate of the board is increasing.

The American College of Surgeons recognizes the certificate of this board as evidence of academic fitness in ophthalmology. It requires from candidates for its Fellowship who hold such certificates only half as many case histories as from those who are not so certificated.

Up to July 1, 1941 approximately 1,875 ophthalmologists have received the certificate of the board.

FEES

The fee for the examination and the certificate of the American Board of Ophthalmology is $50. Of this sum $25, which is not returnable, must accompany the application. The balance of $25 must be paid when the certificate is ready for issuance.

If a candidate fails in the written examination, he may be admitted to a second examination within three years, for which there will be an additional fee of $10.

Applications expire three years from date of application. If a candidate has not appeared for examination before expiration of his application, he will be required to apply again and pay an additional application fee of $25.

The fees of candidates are used solely for defraying the actual expenses of the board. The members of the board and their associates receive no emoluments.

GENERAL REQUIREMENTS FOR ALL CANDIDATES

1. Application on special blank, which may be obtained from the secretary, must be filled out accurately. Letters of endorsement from two well known physicians (preferably ophthalmologists) together with any other required credentials must accompany the application and must be sent to the secretary at least before December 1 preceding date when the candidate expects to appear for the written examination.

2. The candidate must have high ethical and professional standing in his community.

3. Membership in the American Medical Association or such other societies as are recognized for the purpose by the Council on Medical Education and Hospitals of the American Medical Association. In the case of an applicant whose training has been received outside of the United States and Canada, his credentials must be satisfactory to the board; if he has been in practice less than ten years he should obtain the certificate of the National Board of Medical Examiners.

4. A list of papers or books published by the candidate must be submitted.

5. Reports of ten cases of varied character which have been observed and treated by the applicant are required.

6. An examination divided into Part I (written) and Part II (clinical, practical and laboratory). In both of these examinations a knowledge of the practical application of the basic sciences of ophthalmology will be required.

7. Citizenship in country where candidate practices.

The final action of the board is based on the candidate's professional record, training and attainments as well as on the results of his formal examinations.

GENERAL EDUCATIONAL REQUIREMENTS

(Applicable as far as possible after 1944)

1. A degree from a medical school of high standing satisfactory to the board and approved by the Council on Medical Education and Hospitals of the American Medical Association. In the case of an applicant whose training has been received outside of the United States and Canada, his credentials must be satisfactory to the board. He may be required to obtain the certificate of the National Board of Medical Examiners.

2. Completion of an internship of not less than one year in a hospital approved by the same Council.

SPECIAL TRAINING

(Applicable as far as possible after 1944)

A period of combined study, training and practice of not less than three years in approved medical schools, hospitals, clinics, dispensaries, laboratories, perceptorships and private practice.

(A total of five years will be required of candidates practicing eye, ear, nose and throat.)

1. This shall include graduate study of the basic medical sciences which are fundamental to the intelligent practice of ophthalmology, particularly: anatomy, histology, embryology, optics, physiologic optics, visual physiology and psychology, pathology, bacteriology, pharmacology. Mere factual knowledge of these subjects is not sufficient. The candidate must have had training in their application and in their use in clinical ophthalmology, especially in refraction, disorders of motility and binocular vision, perimetry, and in the skilful adjustment and use of instruments such as the ophthalmoloscope, retinoscope, slit lamp and microscope.

2. Active clinical experience in approved hospitals, clinics, dispensaries and private practice. Library and laboratory facilities should be utilized for the intensive study of cases.

The subject matter to be covered under 1 and 2 is outlined in the syllabus prepared by the board.

These requirements may be met in various ways:

BASIC STUDIES

A—By courses in approved graduate medical schools.

B—By the opportunities for study afforded by the appointment to a junior position in one of the departments with attendance at advanced lectures in the other subjects.

C—By advanced study of these subjects while a resident and by application of the principles involved to patients under one's control.

D—By the detailed study, under supervision or as assistant to an experienced research worker, of some problem or topic which brings the basic facts of physiology, pathology, etc., into direct relation with the concrete clinical problem. The analysis of a problem with detailed knowledge of its fundamental physiologic and pathologic background does much to stimulate thoroughness, clear thinking and progress.

CLINICAL EXPERIENCE

A—By residency in an approved hospital. The most desirable of these residencies have regular lectures covering the whole field of clinical ophthalmology and of the basic subjects as applied in clinical practice. Many of these have seminars at which residents report cases which they have carefully worked up. These are discussed by the other residents and by the staff and the method of presentation as well as the subject matter critically considered.

B—There are many residencies, usually of 12 months, which do not furnish regular instruction by lectures and quizzes and seminars. If he has access to a good library and laboratory, the student can learn a great deal and has some advantages over the man who expects to be "spoon-fed." The syallbus prepared by the board will guide him in his selection of topics to be studied.

C—There are some opportunities to continue the study and experience by securing appointments as fellows.

D—By a period of training in association with a well trained and critical ophthalmologist who takes the trouble to teach and guide his assistant.

E—After completing a residency it is of great advantage to secure a position in a clinic as fellow or assistant. This may require only part time work, but due credit will be given. Its value to the student depends on how much study he puts into it and on how competent his seniors are.

F—Research under competent critical and sympathetic supervision will give first hand insight into (1) the methods whereby old knowledge was and new knowledge is acquired, and (2) the pitfalls which accompany attempts to enlarge the sphere of knowledge. Only in this way can the candidate evaluate facts of the past and present in the intelligent critical way which is expected of the specialist.

The candidate who cannot secure the type of residency he desires should not despair, for his progress depends far more on how he uses his opportunities than on the opportunities themselves.

WHAT CONSTITUTES THE EXAMINATION

In determining the question of certification, the examiners rely on the following criteria:

1. The applicant's professional and ethical record;
2. Case reports;
3. Written examination;
4. Practical clinical and laboratory examination.

CASE REPORTS

Detailed instructions for the preparation of case reports should be obtained from the secretary.

WRITTEN EXAMINATION: PART I

The written examination may be given simultaneously in as many cities as the board may determine suitable for the purpose. A candidate, to be eligible for Part I, must meet all general requirements. Arrangements will be made for candidates to report in a convenient city where there may be a board member, or an associate member, to conduct and supervise the written examination.

These examinations will not be given at the time of the oral and clinical examination or board sessions but will be held at least sixty days before such examinations simultaneously in different parts of the country at places reasonably convenient to candidates.

No candidates shall be eligible for the practical examination until he has passed the written examination and his case reports have been found satisfactory. In the event of failure in either or both of these preliminary tests, a candidate is conditioned and the conditions must be removed before the candidate is eligible to appear for the practical (Part II) examination.

The written examination questions will be on all subjects as follows:

External Diseases.	Perimetry and Campimetry
Ophthalmoscopy	Relation of the Eye to General Diseases
Pathology-Histopathology	
Refraction and Retinoscopy	Therapeutics and Operations (including Practical Surgery)
Anatomy and Embryology	
Ocular Motility	Optics and Visual Physiology

Written examination papers will be reviewed by examiners who reside in districts remote from those in which the candidate practices.

PRACTICAL AND CLINICAL EXAMINATION: PART II

The purpose of the examination is to determine the competence of the candidate to practice ophthalmology.

Candidates must be prepared to be examined in the whole field covered by the syllabus of the board. The time spent in preparation will count less than the knowledge and experience acquired as shown on examination.

The subdivisions of the practical examination are as follows:

1. External diseases of the eye, lacrimal passages, etc., including inspection, focal illumination, use of loupe and slit lamp, examination of reactions of the pupil, of tension by tonometer and by fingers.

2. Ophthalmoscopy. Several patients will be examined by the candidate and the findings described or drawn. The ability to see with the ophthalmoscope and to interpret what is seen, and the systematic and thorough methods of examination used by the candidate will count for more than mere statement of diagnosis. A candidate should bring his own ophthalmoscope so that he may not suffer the handicap of an unfamiliar instrument.

3. Pathology. The candidate should be familiar with general clinical pathology as well as the etiology, pathology, and bacteriology of diseases of the eye. He will be asked to examine microscopic slides and to recognize ordinary normal and pathologic histology of the eye and to identify the commoner microorganisms.

4. Refraction. A candidate will examine patients and show mastery of various methods, and of the principles of refraction and of retinoscopy. He should bring his own retinoscope.

5. Ocular Motility. The candidate will demonstrate upon patients his familiarity with routine methods of examination for abnormalities of the ocular muscles.

6. Practical Surgery. A candidate will demonstrate his surgical technic upon animals' eyes. To have the advantage of using instruments with which he is familiar, he should bring his own equipment for performing a regular combined extraction of the lens.

DATES OF PART II EXAMINATION

Examinations will be held annually at or near the time and place of the meeting of the American Medical Association; also at other times and places at the discretion of the board, depending on the number of applications from any region.

Notices of all examinations will be found in The Journal of the American Medical Association, and in the special journals of ophthalmology.

REEXAMINATION

Candidates may be reexamined as often as they desire, provided they give satisfactory evidence of adequate preparation. One year must elapse between examinations and the board may, at its discretion, deny the candidate the privilege of reexamination.

REVOCATION OF CERTIFICATE

Any certificate issued by the board shall be subject to revocation by the board at any time in case it shall determine in its sole judgment that a candidate, who has received the certificate

of the American Board of Ophthalmology, either was not properly qualified to receive it, or has since its receipt become disqualified.

PREPARATORY GROUP

In establishing a preparatory group of prospective candidates for its certificate, the American Board of Ophthalmology plans to assist physicians who wish to study ophthalmology so that they will be acceptable as candidates for examination and certification when they have completed the requirements.

Any graduate or undergraduate of an approved medical school is eligible to make application for membership in this group. Candidates so applying will be notified officially by the secretary when the board has accepted their applications. If accepted, data will be sent concerning ethical and educational requirements. Syllabuses and other information will be made available to them. The board desires to help candidates improve their opportunities so that they will be fully prepared for the examination.

It is essential that candidates conduct themselves in an entirely ethical manner so that they will bring honor to the profession.

Information and counsel will be available at all times to accepted candidates in this group through advisers who are members or past members of the board.

Members of the preparatory group must keep a summarized record of their activities, two copies of which will be sent to the secretary in January of each year and will be incorporated in the final application for examination and certification.

The fee for application for membership in the preparatory group is $10. This will be deducted from the $50 which is required of every candidate for examination. When the candidate makes application for the examination, he will be required to pay $25, and the balance of $15 must be paid when the certificate is issued. No fees will be refunded.

It is of increasing importance that a physician specializing in diseases of the eye obtain the certificate of the American Board of Ophthalmology. The American Medical Association will especially designate certificated ophthalmologists in future directories. A special directory of all certificated specialists will be published by the Advisory Board for Medical Specialties.

Many national and local ophthalmologic societies demand the certificate of the American Board of Ophthalmology before admission. Promotion in many hospitals cannot be obtained unless the applicant holds the certificate of the board.

For sufficient reason, a person enrolled in this preparatory group may be dropped by vote of the board.

Communications should be addressed to the secretary-treasurer.

AMERICAN BOARD OF ORTHOPAEDIC SURGERY, Inc.

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MELVIN S. HENDERSON, Rochester, Minn.
SAMUEL KLEINBERG, New York.
J. SPENCER SPEED, Memphis, Tenn.
PHILIP D. WILSON, New York.

INTRODUCTION

The rapid growth of specialism and the increasing number of physicians limiting themselves in their practice to one branch of medicine or surgery emphasize the need for the proper certification of specialists in the various branches of the medical science. In recognition of this condition the American Board of Orthopaedic Surgery, Inc., aims to elevate the standard of qualifications for the practice of orthopaedic surgery and to certify those surgeons who voluntarily comply with its requirements.

In order to place orthopaedic surgery on the highest possible plane, the American Orthopaedic Association, the Section on Orthopaedic Surgery of the American Medical Association and the American Academy of Orthopaedic Surgeons united in organizing a certifying board which was incorporated in the year 1934 as the American Board of Orthopaedic Surgery, Inc.

The American Board of Orthopaedic Surgery, Inc., has been officially approved by the Advisory Board for Medical Specialties and by the Council on Medical Education and Hospitals of the American Medical Association.

WHAT THE BOARD WILL ACCOMPLISH

1. Certification by the board will establish a criterion to both interested lay and professional groups for judging the qualifications of an orthopaedic surgeon. Thus a reliable guide will be furnished for the choosing of consultants.

2. Hospitals and other organizations will no doubt establish rules limiting service on their permanent staffs to those certified by the board.

3. It will gradually tend to limit the practice of orthopaedic surgery to those properly qualified.

4. Certification by the American Board of Orthopaedic Surgery is one of the essential requirements for membership in the American Orthopaedic Association and the American Academy of Orthopaedic Surgeons.

Excerpts from Articles 1, 2, 7 and 8 of the By-Laws.

Article 1. *Section 1.* DEFINITION. Orthopaedic Surgery is that branch of surgery especially concerned with the preservation and restoration of the functions of the skeletal system, its articulations and associated structures.

Article 2. *Section 2.* PURPOSES. To test and determine the qualifications of applicants for registration and to issue certificates to those found qualified.

Section 3. To prepare and maintain a registry of the holders of the certificates issued by the board.

Section 4. To serve the public, physicians, hospitals and medical schools by furnishing lists of those who have received the certificate of the board, and thus to assist in protecting the public against irresponsible and unqualified practitioners who profess to specialize in orthopaedic surgery.

Article 7. *Section 1.* APPLICATION FOR CERTIFICATE. Each application for a certificate shall be filed with the secretary upon the prescribed form, and shall be accompanied by the fee which the board may fix from time to time. It shall also be accompanied by an unmounted autographed recent photograph of the applicant and the names of two orthopaedic surgeons acceptable to the board, who may be referred to for information in regard to the applicant.

Section 2. The applicant must have the following qualifications:

(a) He must be a graduate of a medical school approved by the Council on Medical Education and Hospitals of the American Medical Association.

(b) He must be of high ethical and professional standing.

(c) He must be a citizen of the United States or Canada.

(d) He must be duly authorized to practice medicine in the state or province of his residence.

(e) He must be a member of the American Medical Association or another society approved by the Council on Medical Education and Hospitals of the American Medical Association.

(f) He must have had one year of internship in a general hospital acceptable to the board.

(g) After Jan. 1, 1940, he must have had three years of concentrated instruction in orthopaedic surgery approved by and acceptable to the board. (A residency of at least two years on an orthopaedic service of a hospital recognized by the Council of the American Medical Association is desirable.)

(h) He must have knowledge of the basic medical sciences related to orthopaedic surgery.

(i) He must have had at least two years' further experience in the actual practice of orthopaedic surgery. Continuation of training (g) beyond the three years required will not be considered as actual practice unless the position of the candidate is considered permanent or his responsibilities equivalent to those encountered in private practice. This means that interns, residents, fellows, graduate students and assistants will not be credited with additional periods of training unless they are permanent members of the organizations with which they are associated.

(j) He must have limited his work to the field of orthopaedic surgery for at least two years prior to the submission of his application for examination.

(k) In the case of an applicant whose training has been received outside of the United States and Canada, his credentials must be satisfactory to the Council on Medical Education and Hospitals of the American Medical Association and to the National Board of Medical Examiners. In addition, he must have been engaged in the practice of orthopaedic surgery in the United States (or Canada) for at least three years prior to the submission of his application.

(l) During the present national emergency, the board will recognize up to a maximum of one year for work done in the orthopaedic division of the Army or Navy. If the above fills

out the three years of special required training for examination, further time spent in the orthopaedic division of the armed forces, up to a maximum of one year, will be credited towards the practice requirement.

Section 3. Each applicant shall be examined and his qualifications determined by the board in such manner as it may designate, and his record shall be reviewed by the board in the light of all assembled information.

Article 8. *Section 1.* CERTIFICATE. If the applicant be found qualified therefor, a certificate that he has been found by this board qualified to practice orthopaedic surgery shall be issued to him. The certificate shall be in such form as may be adopted by the board, and shall be signed by the officers and members of the board.

EXAMINATION

Examinations will be held once or twice a year. If feasible, these examinations will be in conjunction with meetings of the major orthopaedic societies.

Oral and written examinations will be held on clinical, anatomical and pathological phases of orthopaedic surgery. Anatomical and pathological laboratories and hospital wards will be used when practicable.

APPLICATION FOR CERTIFICATION

Application forms may be obtained from the secretary of the board. These should be filled in accurately and returned not less than ninety days prior to the next examination. An autographed photograph and the fee must accompany the application.

FEES

The examination fees have been adjusted so as to be in closer accord with the other specialty boards. A fee of $50 will accompany the application and cover the expenses of the first examination. Candidates appearing before the board for second and third examinations will pay additional fees of $25 for each of the subsequent examinations following the first. This will take effect as of Jan. 15, 1941 and will not be retroactive.

AMERICAN BOARD OF OTOLARYNGOLOGY

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BURT R. SHURLY, Vice President, Detroit.
WILLIAM P. WHERRY, Secretary-Treasurer, 107 South Seventeenth Street, Omaha.

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WILLIAM P. WHERRY, Omaha.

ORIGIN, AIMS AND METHODS

SOURCE OF AUTHORITY

In 1916 the American Academy of Ophthalmology and Otolaryngology appointed a committee on examinations, consisting of Drs. Thomas E. Carmody, Harris P. Mosher and Ross Hall Skillern, before whom new members professing otolaryngology as their sovereign work, were to appear to be qualified as such.

In 1924, through the persistent efforts of Dr. George Shambaugh, this activity was enlarged to include representatives from the American Otological Society; the American Laryngological Association; the American Laryngological, Rhinological and Otological Society; the American Academy of Ophthalmology and Otolaryngology; and the Section on Laryngology, Otology and Rhinology of the American Medical Association. Each organization appointed two members, making a total of ten, which constituted the first American Board of Otolaryngology.

Dr. T. H. Halsted of Syracuse, New York, and Dr. H. W. Loeb of St. Louis were appointed to represent the American Otological Society; Dr. H. P. Mosher of Boston and Dr. R. H. Skillern of Philadelphia were appointed to represent the American Laryngological Association; Dr. B. R. Shurly of Detroit and Dr. F. R. Spencer of Boulder, Colorado, to represent the American Laryngological, Rhinological and Otological Society; Dr. T. E. Carmody of Denver and Dr. W. P. Wherry of Omaha to represent the American Academy of Ophthalmology and Otolaryngology; and, Dr J. C. Beck of Chicago and Dr. R. C. Lynch of New Orleans to represent the Section on Laryngology, Otology and Rhinology of the American Medical Association.

CHIEF ACTIVITIES OF THE BOARD

First. To establish standards of fitness to practice otolaryngology.

Second. To arrange, control and conduct examinations to test the qualifications of those who desire to practice otolaryngology and to confer a certificate on those who meet the established standards.

These activities proceed from the object of the corporation which is stated in the Articles of Incorporation to be:

"The object of the corporation shall be to elevate the standard of otolaryngology, to familiarize the public with its aims and ideals, to protect the public against irresponsible and unqualified practitioners, to receive applications for examination in otolaryngology, to conduct examinations of applicants, to issue certificates of qualification in otolaryngology and to perform such duties as will advance the cause of otolaryngology."

NO DEGREES

The conferring of a degree is left to the universities, where it belongs, and the board makes no attempt to control the practice of otolaryngology by efforts to promote any license or legal regulation whatever. It simply aims to establish a standard of fitness to practice otolaryngology, and to certificate those who voluntarily apply and satisfy the board of their qualification.

VALUE OF CERTIFICATE

The five national otolaryngological associations responsible for the organization of the board are sponsoring its activities. Four of these associations require the board certificate from each applicant for membership.

Other important societies and organizations are following the example of these influential organizations. Moreover, the certificate of the board is required of candidates for appointments in many and various important positions in hospitals, colleges, etc. It is expected that the medical public and the lay public will learn to discriminate between those who are well fitted and those who are not, and will be influenced by the certificate of the board in arriving at their conclusions.

CLASSIFICATION OF CANDIDATES

Applicants for examination and for the certificate of the board are divided into classes according to the length of time they have practiced otolaryngology.

(Limited practice in otolaryngology interpreted as 90% otolaryngological practice—ophthalmolcgy excepted.)

Class I—Limited Practice—15 years or more.

Class II—Limited Practice—10 to 15 years.

Class III—Limited Practice—5 to 10 years.

Class IVA—Limited Practice—5 years.

Class IVB—Limited Practice—3 and 4 years.

(Only candidates having completed a satisfactory residency or an acceptable full academic year basic science course are eligible to IVB.)

REQUIREMENTS

UNTIL JAN. 1, 1942

The following general requirements are demanded by the board:

First. A candidate acceptable for the examination must be a graduate from a school approved by the Council on Medical

Education and Hospitals of the American Medical Association; furthermore, he must have at least one year of internship in an approved hospital.

Second. Membership in the American Medical Association or, by courtesy, membership in such Canadian or other medical societies as are recognized for this purpose by the Council on Medical Education and Hospitals of the American Medical Association. Except as here provided, membership in other societies should not be required.

Third. In addition, a candidate must have completed at least three years graduate preparation for the specialty, at least one year (more desirably two) in a recognized residency or in basic courses and followed by private practice in otolaryngology.

Fourth. Five years of specialized practice will be accepted in lieu of the requirements of paragraph 3 until Jan. 1, 1942.

Fifth. Application must be made on a special blank procured from the secretary. It must be executed and returned to the secretary, together with other required credentials, sixty days in advance of the examination at which the candidate desires to appear.

Sixth. All applicants must send a small photograph with application and must present themselves in person before the board.

Seventh. Fee for the examination is $50 and same must accompany application blank. No application will receive consideration until fee is paid.

Eighth. An application remains valid only five years—therefore, an applicant must appear for examination within this time or forfeit fee. The fee under no circumstances is returnable.

If the candidate fails in an examination he will be admitted to a second examination after one year, but within the regulation time limit of his application. Sixty days' notice of intention to appear is required. If a candidate who has failed does not appear before the expiration of validity of his application he will be required to make new application and pay additional fee of $50 before reexamination.

An applicant having failed twice, must file a new application, pay an additional fee of $50 and convince the board of additional postgraduate study previous to being assigned appointment for another examination.

Examinations covering two or three days will be held bi-annually at, or near, the time and place of meeting of the American Medical Association, and of the American Academy of Ophthalmology and Otolaryngology.

An extra examination is sometimes held provided the class of applicants is large enough to warrant it.

Candidates are required to sign the following pledge:

I hereby apply to the American Board of Otolaryngology for examination by the said board in accordance with its rules and herewith enclose the fee of fifty ($50) dollars. I hereby agree that prior to an examination, or subsequent to my examination, the board may investigate my standing and reputation as a physician, including my reputation for complying with the standard of ethics of the profession, and may refuse to examine me, or, having examined me, may refuse a certificate, and such refusal to grant a certificate, whether justified or otherwise, may not and shall not be questioned by me in any court of law or equity or other tribunal, nor shall I have any claim, in the event of such refusal, to a return of the fee accompanying this application.

PRACTICAL EXAMINATION

1—Written examinations:

Class III, Class IVA and Class IVB.

2—Pathology:

Microscopy—Class IVA, Class IVB.

Gross—Class III, Class IVA and IVB.

3—Clinical examination of patients: To include history taking; physical and functional examinations; use of laboratory and x-ray findings; discussion of differential diagnosis; and discussion and defense of his findings, opinion and suggested management.

All classes.

4—Didactic examination to be a private, oral examination covering any aspect of otolaryngology and its interrelation with general medicine.

All classes.

Communications should be addressed to the secretary-treasurer.

AMERICAN BOARD OF PATHOLOGY, Inc.

A. H. SANFORD, President, Rochester, Minn.
FREDERICK H. LAMB, Vice President, Davenport, Ia.
FRANK W. HARTMAN, Secretary-Treasurer, Henry Ford Hospital, Detroit.
ALVIN G. FOORD, Pasadena, Calif.
NATHAN CHANDLER FOOT, New York.
HOWARD T. KARSNER, Cleveland.
ROY R. KRACKE, Emory University, Ga.
JOSIAH J. MOORE, Chicago.

ORGANIZATION AND OBJECTIVES

In June 1935 the Section on Pathology and Physiology of the American Medical Association and the American Society of Clinical Pathologists appointed committees which acted jointly in consideration of the feasibility and necessity of a national qualifying board. The joint committees agreed unanimously that such a board should be established and proceeded to draw up by-laws for such a board. In May 1936 the American Society of Clinical Pathologists and the Section on Pathology and Physiology of the American Medical Association accepted the proposed by-laws, authorized the nomination of four members each to the board and suggested incorporation in the state of Michigan. Approval of the board by the Advisory Board for Medical Specialties and the Council on Medical Education and Hospitals of the American Medical Association was given. On July 19, 1936, the organization of the board was carried out in Chicago.

PURPOSES

A. To encourage the study and promote the practice of pathology.

B. To elevate the standards and advance the cause of pathology, by encouraging its study and improving its practice.

C. To determine the competence of those wishing to practice this specialty of pathology and to arrange, conduct, and control investigations and examinations to determine the qualifications of such individuals who voluntarily apply for the certificates issued by the corporation.

D. To grant and issue certificates in the special field of pathology to voluntary applicants therefor and to maintain a registry of holders of such certificates.

E. To serve the public, the medical profession, hospitals, and medical schools by preparing and furnishing lists of specialists who have been certified by the corporation.

VALUE OF THE CERTIFICATE

Judging from the experience of other specialties operating a certifying board it is anticipated that the certificate will be of value in that the medical profession, the lay public, and hospital administrators will utilize certificates from the board as a means of discriminating between those that are thoroughly qualified in pathology and those that are not. Lists of those holding certificates will be made available from time to time by this board through the publication of the same in pamphlets and in national medical journals.

BOARD NOT AN EDUCATIONAL INSTITUTION

The board is in no sense an educational institution and the certificates of the board are not to be considered degrees. Therefore the certificate does not confer on any person legal qualifications, privileges, or license to practice medicine or the specialty of pathology. The board does not purport in any way to interfere with or limit the professional activities of any licensed physician. Its chief aim, as stated above, is to standardize the qualifications for the specialty of pathology and to issue certificates to those voluntarily complying with the requirements of the board.

GENERAL REQUIREMENTS

A. General qualifications.

1. Satisfactory moral and ethical standing in the profession.

2. License to practice medicine.

3. Membership or associate membership in the American Medical Association or by courtesy membership in such Canadian or other national medical societies as are approved by the Council on Medical Education and Hospitals of the American Medical Association is suggested.

4. That the applicant devotes his time primarily and principally to the practice of pathology.

B. Professional education.*

* NOTE: In case of an applicant whose education and/or training has been received outside the United States or Canada, his credentials must be acceptable to the National Board of Medical Examiners and the American Board of Pathology.

1. Graduation from a medical school in the United States or Canada, approved by the Council on Medical Education and Hospitals of the American Medical Association.

C. Special training, to be effective after July 1, 1938:

1. Completion of an internship of not less than one year in a hospital approved by the Council on Medical Education and Hospitals of the American Medical Association.

2. A period of study, exclusive of internship, of not less than three calendar years, exclusive of reasonable vacation periods, in an institution or department of pathology recognized by the same council and the board of trustees as competent to provide a satisfactory training in the field of pathology. This period of special training preparation shall include the following:

(a) Graduate training for one year in the various phases of clinical pathology.

(b) Training and experience of not less than two years in a department of pathologic anatomy.

(c) Such training may be combined or in sequence.

3. A fifth year of training or practice in pathology.

D. Special qualifications:

1. The board may accept candidates without special training as outlined in Section C above provided that:

(a) The candidate shall have been for a period of five years of professorial rank in a department of pathology in an approved medical school, or

(b) The candidate shall have been practicing pathology for ten years in a senior position in a hospital, having an adequate department of pathology, and approved by the Council on Medical Education and Hospitals of the American Medical Association.

Candidates with special qualifications, as outlined in Section D above, may be certified without examination, at the discretion of the board.

APPLICATION BLANK AND FEE

Application must be made on the special form which may be procured from the secretary and forwarded with other required credentials and the application fee. Applications cannot be given consideration by the board unless accompanied by the application fee.

The application or examination fee for candidates is $35. If certified without examination $10 of fee will be refunded. If the candidate fails in his examination he will be admitted to a second examination after one year, but not later than three years, without additional fee. After two reexaminations the applicant must file a new application and pay an additional fee before a fourth examination will be given.

The examination fee of $35 has been arrived at after careful consideration, and is based on actual estimates of the expense of examination and administration. None of the board members receive any compensation for their services except actual expenses incurred.

If the applicant, for any reason, is deemed ineligible for examination by the board his fee will be returned; however, the application fee is not returnable after the candidate has officially been accepted for examination and notified to report for the same.

EXAMINATIONS

Written and oral examinations will be held at or near the time and place of national medical meetings at the discretion of the board. If a number of applications from any region of the country are received an examination in conjunction with a national medical meeting in that section will be arranged so that the financial outlay of the applicant in meeting the examiners will be as small as possible.

The examinations are to be based on the broad principles of pathology with emphasis on diagnosis and interpretation. The applicant may apply for certification in either pathologic anatomy or clinical pathology, or both.

DEFINITIONS

1. Pathologic anatomy is that branch of pathology which deals with the morphological aspects of disease, recognition being given that this definition covers two phases of pathology.

(a) The applied phase, with special attention to biopsy description and diagnosis.

(b) The academic phase of teaching and general morphological diagnosis.

2. Clinical pathology is that branch of pathology which deals with bacteriology, immunology, biochemistry, parasitology, hematology, and clinical microscopy, in relation to the diagnosis, prognosis, and treatment of clinical disease.

REEXAMINATIONS

In case the candidate fails in the qualifying examination he will be eligible for reexamination after one year has elapsed, but he must give written notice of his intention to appear for reexamination. Two reexaminations are allowed without an additional fee, providing they are taken within a three year period. The candidate who fails three times must file a new application and pay a second $35 fee before he is eligible for further examination.

REVOCATION OF CERTIFICATES

Certificates issued by the American Board of Pathology are subject to the provisions of the Articles of Incorporation No. XI, Section 4. Any certificate issued by the Board of Trustees shall be issued subject to revocation in the event that:

(a) The physician or party so certified shall have made any misstatement or misrepresentation of a material fact in his application, or in any other communication to the board or its representatives, which misstatement or misrepresentation affected the eligibility of the physician or the party so certified.

(b) The issuance of such certificate has been made contrary to or in violation of any of the rules, laws, or regulations of this corporation.

(c) It is ascertained that the physician or party so certified is not eligible in fact to receive such certificate.

(d) The physician or party receiving such certificate shall prior to the issuance of such certificate or thereafter have been convicted by a court of competent jurisdiction of a felony or of any misdemeanor, which misdemeanor in the opinion of the Board of Trustees, shall involve moral turpitude.

(e) The physician or party receiving such certificate shall prior thereto, or thereafter, have his license to practice medicine revoked.

(f) The physician or party receiving such certificate shall be expelled from any of the societies or organizations making him eligible to this corporation as an applicant for such certificate.

All communications should be addressed to the secretary-treasurer.

AMERICAN BOARD OF PEDIATRICS, Inc.

BORDEN S. VEEDER, President, St. Louis.

C. ANDERSON ALDRICH, Secretary-Treasurer, 707 West Fullerton Avenue, Chicago.

HORTON CASPARIS, Nashville, Tenn.

FRANKLIN PAUL GENGENBACH, Denver.

CHARLES F. MCKHANN JR., Ann Arbor, Mich.

EDWARD BYER SHAW, San Francisco.

HAROLD COE STUART, Boston.

PHILIP VAN INGEN, New York.

ALFRED AUGUSTUS WALKER, Birmingham, Ala.

ORIGIN

The American Board of Pediatrics was established in June 1933 by joint action of the American Pediatric Society, the American Academy of Pediatrics and the Section on Pediatrics of the American Medical Association after consideration of the report of a committee on pediatrics as a special field of medical practice. The committee recommended that the certification plan adopted and in use in the fields of ophthalmology, otolaryngology, gynecology and obstetrics, and dermatology be adapted to pediatrics. Similar boards have been subsequently formed in all the other special fields.

In order to correlate the activities of the various qualifying boards there has been formed the Advisory Board on Medical Specialties, composed of representatives of all the qualifying boards, including the American Board of Pediatrics, as well as representatives of the Association of American Medical Colleges, the National Board of Medical Examiners, the Federation of State Medical Boards of the U. S. A. and the American Hospital Association.

Any method of certification in any specialty must be national in scope, must in its ultimate analysis be controlled by the men in each special field and must be independent of society membership or affiliation. The American Board of Pediatrics fulfils these three essentials: A uniform standard of competency is set up, the character of which is assured through the affiliation with the Advisory Board on Medical Specialties; the board is controlled by pediatricians, its membership being composed of three men appointed by each of the three national pediatric societies; the board is not a medical society, however, and certification is independent of society affiliation.

The American Board of Pediatrics was incorporated in the state of Delaware in November 1933 as a nonprofit organization.

FUNCTION

The functions of the board are outlined in the articles of incorporation as follows:

"To encourage the study, improve the practice and elevate the standards of pediatrics; and to grant and issue to physicians, duly licensed by law, certificates or other equivalent recognition of special knowledge in pediatrics."

The board has interpreted this to mean that its efforts to encourage and improve the practice of pediatrics shall be limited to its function of certification of competency in the specialty. Obviously other organizations are better able to further the general improvements in pediatrics.

The board specifically defines its activities as follows:

1. To establish standards by which the competency of men to practice pediatrics may be estimated.

2. To arrange, control and conduct examinations to test the qualifications of those desiring certification as pediatricians.

3. To grant certificates of qualification to those applicants who meet the standards successfully.

The board further feels that in carrying out these activities it is merely acting as the agent of the three societies which appointed its members and initiated the project.

No financial recompense of any kind is made to any member of this board except to cover actual traveling expenses to meetings and examinations. The $30 application fee is fixed below that of any of the similar examining boards of other specialties. In the light of experience of the existing boards it may later be necessary to raise this fee to carry on the work of the board successfully.

CERTIFICATE—NOT A DEGREE

Certificates granted are in no sense degrees, nor do they purport to confer upon any person any legal qualification, privilege or license to practice pediatrics. Neither does the board intend in any way to limit the activities of any licensed physicians. It is merely attempting to standardize qualifications and to issue certificates to those who voluntarily comply with the requirements.

VALUE OF THE CERTIFICATE

It is anticipated that the certificate will become of value in that both the medical and lay public, including hospital directors, will soon utilize the certificate from this board as a means of discriminating between those who are well grounded as pediatricians and those who are not.

A certificate is required as one of the qualifications for new members of the American Academy of Pediatrics. The certificate of the American Board of Pediatrics is recognized by the Council on Medical Education of the American Medical Association. Holders of certificates are so designated in the directory of the American Medical Association.

A joint Directory of Specialists certified by the fifteen specialty boards was published in 1940 by the Advisory Board for Medical Specialties.

Lists of those holding certificates from this board are published in this Directory of Medical Specialists and additional lists of new licentiates are published in the Journal of Pediatrics and the American Journal of Diseases of Children. The American Medical Directory indicates diplomates of this and other boards by means of abbreviations and symbols (A.B.1) appearing in the biographic records.

This board, in cooperation with the Council on Medical Education and Hospitals of the American Medical Association, is conducting a survey of institutions providing acceptable residencies and internships in pediatrics.

APPLICANTS FOR CERTIFICATES

Requirements for Applicants.—Each applicant for a certificate must establish in a manner satisfactory to the board that he is of high ethical and professional standing, is a graduate of a medical school which is satisfactory to the board, and has received adequate training in pediatrics as a specialty in addition to passing the examination given by this board.

Applicants must be citizens of the United States, of its dependencies, or of Canada.

Applicants will be divided into two classes, according to the length of time they have been engaged in the specialty.

Following is the classification of applicants for certification. The changes are based upon the experience gained from examination and upon the general requirements as adopted by the Advisory Board of Medical Specialties and the Council on Medical Education and Hospitals of the American Medical Association.

All applicants must take the examinations.

Group I.—Physicians who have specialized in pediatrics for ten years or more. After July 1, 1943, Group I will be abolished.

The minimum requirements for *Group II* are as follows:

Graduate of a Class A medical school.

One year's intern service in a recognized hospital.

Two years' service in a pediatric center.*

An additional term of two years of specialized study and/or practice.

The board defines service in a pediatric center as full time devoted to rounded experience in an acceptable hospital or a graduate course, which includes ward and outpatient service and both therapeutic and preventive pediatrics. The time served in pediatric centers need not be continuous or spent in the same institution. In the case of a post-graduate course an academic year will meet the requirement of one year's work.

The application fee is $30 and must be remitted with the application. Refund will be made only if the applicant is refused examination. The applicant who has failed in an examination will not be required to pay a second fee if he takes another examination after the lapse of two years.

Application must be made on special blanks which may be secured from the secretary. These must be sent to the secretary at least *four months* before the date at which the candidate expects to take the examinations.

Letters from two competent pediatricians recommending each applicant must be sent to the secretary of the board. These letters are not to accompany the application, but should be sent directly to the secretary. No member of the board may recommend any applicant.

INFORMATION CONCERNING EXAMINATIONS

Examinations will be held at or near the time and place of meetings of the American Medical Association and of the American Academy of Pediatrics, or at other times and places at the discretion of the board, depending on the number of applicants from any region of the country. It is proposed to arrange examinations in different cities so that as little financial burden as possible will be placed upon the applicants in meeting the examiners.

The purpose of these examinations is to determine the applicant's competency to practice pediatrics. This board feels that the best impression of an applicant's ability can be obtained by oral examination although written ones may be substituted at times. However, at the present time this board is also giving a written examination at least six weeks preceding the oral examination. This written examination is given locally under a monitor. It is not proposed at the present time to require the applicant to send in case reports. The board feels that growth and development are fundamental parts of pediatric training.†

A list of papers or books published must be sent with the application blank.

It should be emphasized that competency in the *practice* rather than in the theory of pediatrics is required.

Communications should be addressed to the secretary.

AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY, Inc.

C. MACFIE CAMPBELL, President, Cambridge, Mass.
WALTER FREEMAN, Secretary-Treasurer, 1028 Connecticut Avenue N.W., Washington, D. C.
LOUIS CASAMAJOR, New York.
FRANKLIN G. EBAUGH, Denver.
TITUS H. HARRIS, Galveston, Tex.
JOHN C. MCKINLEY, Minneapolis.
JOHN M. MURRAY, Boston.
J. M. NIELSEN, Los Angeles.
TRACY J. PUTNAM, New York.
HANS H. REESE, Madison, Wis.
EDWARD A. STRECKER, Philadelphia.
LLOYD H. ZIEGLER, Wauwatosa, Wis.

HISTORY AND STATEMENT OF PRINCIPLES

The American Board of Psychiatry and Neurology was founded in 1934 following conferences of committees appointed by the American Psychiatric Association, the American Neurological Association, and the Section on Nervous and Mental Diseases of the American Medical Association. This action was taken in response to a widespread desire among specialists in psychiatry and neurology for some means of distinguishing the fully qualified specialist from the would-be specialist of inferior training and inadequate experience. That this desire is by no means limited to those who practice psychiatry and neurology is indicated by the formation of corresponding boards

* A maximum of six months of this time may be spent in full time contagious work in a recognized hospital.

† The three volumes on Growth and Development of the White House Conference contain this material, Century Company, publishers.

covering internal medicine, surgery, and the major specialties. The success of this method of distinguishing the specialists is indicated by the increasing number of candidates taking the examinations, and by the listing accorded in the American Medical Directory to those specialists holding the certificates of the various boards.

CONSTITUTION AND ACTIVITIES

The American Board of Psychiatry and Neurology is composed of twelve members, four each from the American Neurological Association and from the American Psychiatric Association and two neurologists and two psychiatrists elected by the Section on Nervous and Mental Diseases of the American Medical Association. Annual elections to fill the places of members whose terms have expired take place in each of the nominating associations with the understanding that neurology and psychiatry are always equally represented on the board. The board holds annual meetings in December of each year for the transaction of whatever business may come before it and also holds special meetings for the purpose of examining candidates and of passing upon the qualifications of those seeking the certificate without examination.

FUNCTIONS

(a) To determine the competence of specialists in psychiatry and neurology.

(b) To arrange, control and conduct investigations and examinations to test the qualifications of voluntary candidates for certificates issued by the board.

(c) To grant and issue certificates or other recognition of special knowledge in the field of psychiatry and neurology to successful voluntary applicants therefor.

(d) To serve the public, physicians, hospitals and medical schools by preparing lists of practitioners who shall have been certified by the board.

(e) To consider and advise as to any course of study and technical training, and to diffuse any information calculated to promote and ensure the fitness of persons desirous of qualifying for a certificate of qualification to be issued thereby.

INFORMATION FOR APPLICANTS

EXCERPTS FROM ARTICLE VII OF THE BY-LAWS

SECTION 1. *Application for Certificates.* Application for certificates shall be considered by the secretary only when made formally on the official application blank in such form as may be adopted from time to time by the board of directors and when accompanied by an application fee in such amount as may be fixed from time to time by the board of directors.

SECTION 2. *Form of Certificates.* There shall be separate certification in psychiatry and in neurology and two certifications or a combined certification for those qualified in both fields. The certificates shall be in such form as is approved by the board of directors.

SECTION 3. *Requirements for Applicants.* Each applicant for a certificate must establish that—

(a) He is a physician duly licensed by law to practice medicine.

(b) He is of satisfactory ethical and professional standing.

(c) He is now a member of the American Medical Association, or a member of such medical societies as are recognized for purposes of certification by the Council on Medical Education and Hospitals of the American Medical Association. Exceptions to the foregoing may be made at the discretion of the board for good and sufficient reasons.

(d) He has received adequate training in psychiatry or neurology, or both, as a specialty.

SECTION 4. No candidate is eligible for examination by the board until he has completed at least five years of special training and experience in neurology or psychiatry for a single certificate, or at least six years of training and experience for certification in both neurology and psychiatry.

CLASSES OF APPLICANTS AND FEES

Applicants may request certification in psychiatry, or in neurology, or in both psychiatry and neurology.

Limitation of practice to the specialty of psychiatry and/or neurology need not be complete provided a candidate both by his previous training, experience and standing, and by examination, can prove his competency to practice that specialty.

However, in case a physician has already been certified by one of the other boards as a specialist in another field, he will not be considered for certification in psychiatry and/or neurology except under special circumstances.

Class I

Physicians who graduated from medical school in 1919 or before and who have carried on specialized practice in neurology and/or psychiatry for at least fifteen years are to be considered on their professional record and passed, if satisfactory to the Board, or further evidence of qualification or examination may be required.

A candidate in Class I who has received certification in either psychiatry or neurology may apply within three years for certification in the other field without additional fee. After three years such application shall be considered as a new application with corresponding fees.

When certification in Class I has been refused, the candidate may file application for reconsideration within three years without additional fee. After three years such application for reconsideration shall be considered as a new application with corresponding fees.

Class II

Physicians who graduated from medical school up to and including 1929 and who have practiced the specialty of psychiatry and/or neurology for at least five years will be required to pass an examination in psychiatry or neurology, or both.

Class III

Physicians who graduated after 1929, up to and including 1934, will be required to pass an examination to satisfy the board that they have adequate knowledge of all subjects specified in the by-laws for candidates graduating after 1934. Their previous training and experience must be acceptable to the board.

Class IV

Candidates graduating from medical school after 1934 shall fulfil the preceding general requirements as given in Section 3 of Article VII and the following special requirements:

PROFESSIONAL EDUCATION

(1) Graduation from a medical school approved by the Council on Medical Education and Hospitals of the American Medical Association.

(2) Completion of a general interneship of not less than one year in a hospital approved by the same Council.

SPECIAL TRAINING

(These requirements are to be placed in force as soon as practicable after Jan. 1, 1944. In the meantime a syllabus covering the knowledge required of the candidate has been prepared and is available to those who request it.)

Admission to the examination for certification in neurology or psychiatry requires a total experience of not less than five years. This period shall include the following:

1. A period of study, after the general internship, of not less than three full years in institutes, hospitals, clinics, dispensaries, laboratories, and other institutions recognized by the Council of the American Medical Association and approved by the American Board of Psychiatry and Neurology as competent to provide a satisfactory training in psychiatry and/or neurology.

(a) As subject matter,

Neuro-anatomy	Psychobiology
Neurophysiology	Psychopathology
Neuropathology	Neuroroentgenology
Clinical neurology	Clinical psychiatry

and other basic medical sciences, which, in the opinion of this board, are necessary to the proper understanding and treatment of psychiatric and/or neurologic disorders.

2. An additional period of not less than two years of practice in psychiatry and/or neurology.

3. Candidates wishing to be admitted to the examinations for certification in both fields must have had a minimum of six years of experience in both fields.

PAYMENT OF FEES

The candidate on filing his application shall accompany it with an application fee of $25. When notified by the secretary that he is eligible for examination he shall send the examination fee of $25 to the secretary at least two weeks before the date of the examination. The certification fee of $25 is payable upon notification by the board that certification has been awarded the candidate in Class I on his record. No fees will be returned.

The same examination is given whether a candidate applies for certification in psychiatry, or in neurology, or in both psychiatry and neurology. The board requires some proficiency in neurology on the part of those it certifies in psychiatry and vice versa, but judges the candidate in accordance with the certificate he seeks.

Should a candidate receive certification in either psychiatry or neurology, he may apply within three years for partial examination for the certificate in the complementary subject, upon payment of a complementary examination fee of $10. After three years, the second application shall be considered a new application, with corresponding $25 fees.

EXAMINATIONS

Date and places of examination are set by the board at its discretion and are announced in *The Journal of the American Medical Association*, in the *American Journal of Psychiatry*, in the *Journal of Nervous and Mental Disease*, and in the *Archives of Neurology and Psychiatry*.

The examinations are designed to test the ability of the candidates to meet the situations in which they might at any time be called upon as specialists to assume responsibility. They will be of such a type that no adequately trained individual will fail, yet they will be sufficiently searching so that the specialist-in-fact will be separated from the specialist-in-name. Each candidate is required to identify and to discuss the function of the more important anatomic structures in the brain and spinal cord, to discuss gross and microscopic pathologic specimens and to interpret roentgenograms dealing with neurologic disorders. He is examined orally on the subjects of psychobiology and psychopathology. These examinations in the preclinical subjects usually last about two hours. Each candidate examines two patients with neurologic disorders and two with psychiatric disorders, and discusses with the examiners the various problems involved. One hour, on the average, is allotted to each of these four clinical examinations. The manner of examining both neurologic and psychiatric patients and the reasoning and deductions therefrom constitute the most important part of the examination. Some acquaintance with the history of psychiatry and neurology, with the body of doctrine, and with the recent advances, is presupposed.

REEXAMINATIONS

A candidate who has failed in one examination is eligible to reexamination in the whole subject, within three years, on payment of a reexamination fee of $10. A candidate who has failed in one examination and who does not apply for reexamination within three years or a person who has applied within that time but who has failed a second time will be considered a new applicant, with corresponding $25 fees. The $10 reexamination fee also applies to candidates conditioned in one or more subjects at any time within three years of the first examination, and is payable before each reexamination.

HANDLING OF APPLICATIONS

An application, in order to be considered at any meeting, must be in the hands of the secretary of the board not less than seventy days before the date of such meeting.

The secretary of the board on receipt of an application shall forthwith make inquiries from those to whom the candidate refers and from such other persons as the secretary may deem desirable and shall verify the candidate's record from the biographical records of the American Medical Association, after which he shall forward the application to the committee on credentials. This committee shall consider the application and other information available and notify the secretary whether the application is accepted. The certification of a candidate in either psychiatry or neurology, or both, shall be approved by a majority of the members of the entire Board at any meeting held for such certification.

PLEDGE

Each candidate is required to sign the following pledge:

"I hereby make application to the American Board of Psychiatry and Neurology, Incorporated, for the issuance to me of a certificate of qualification as a specialist in (a) Psychiatry; (b) Neurology; (c) Psychiatry and Neurology (check the one desired) and for examination relative thereto, all in accordance with and subject to its rules and regulations. Upon the issuance of the certificate I agree to and do become bound by the by-laws of the American Board of Psychiatry and Neurology, Inc., insofar as applicable.

"I agree to disqualification from examination or from the issuance of a certificate of qualification or to forfeiture and redelivery of such certificate of qualification in the event that any of the rules governing such examination are violated by me or for any one of the reasons set forth in the by-laws. I agree to hold said American Board of Psychiatry and Neurology, Inc., its members, examiners, officers and agents, free from any damage or claim for damage or complaint by reason of any action they, or any of them, may take in connection with this application, such examination, the grade or grades given with respect to any examination, and/or the failure of said corporation to issue to me such certificate of qualification."

RULES AND REGULATIONS
(ART. VII, SEC. 5, OF THE BY-LAWS)

The board of directors, from time to time, by resolution adopted by the affirmative vote of a majority then in office, may adopt, amend and repeal rules and regulations respecting requirements of applicants, the nature and extent of examinations and investigations and issuance of certificates.

REVOCATION OF CERTIFICATES
(ART. VII, SEC. 6, OF THE BY-LAWS)

All certificates issued by the corporation shall be issued subject to the provisions of the certificate of incorporation and of the by-laws of the American Board of Psychiatry and Neurology, Inc. Each such certificate shall be subject to revocation in the event that:

(a) The issuance of such certificate or its receipt by the physician shall have been contrary to or in violation of any of the provisions of the corporation's certificate of incorporation or by-laws; or

(b) The physician so certified shall not have been eligible in fact to receive such certificate, irrespective of whether or not the facts constituting him so ineligible were known to any or all of the directors of the corporation or could have been ascertained by any or all of the directors of the corporation at the time of the issuance of such certificate; or

(c) The physician so certified shall have made any deliberate misstatement of fact in his application for such certificate or in any other statement or representation to the corporation, its directors, representatives or agents; or

(d) The physician so certified shall have been convicted by a court of competent jurisdiction of a felony or of any misdemeanor involving, in the opinion of the board of directors of the corporation, moral turpitude in connection with his practice of medicine; or

(e) The physician so certified shall have had his license to practice medicine revoked or shall have been disciplined or censored as a physician by any court or other body having proper jurisdiction and authority.

FORM OF CERTIFICATE

The secretary shall have prepared subject to the approval of the board members a form of certificate containing the following wording:

THE AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY, INC.

This is to certify that.....has satisfied the requirements of the board and is hereby certified as qualified to practice the specialty of Psychiatry and/or Neurology.

(Signed) President.....
Vice President.....
Secretary .....

Communications should be addressed to the secretary.

AMERICAN BOARD OF RADIOLOGY, Inc.

GEORGE W. HOLMES, President, Boston.
J. W. PIERSON, Vice President, Baltimore.
BYRL R. KIRKLIN, Secretary-Treasurer, 102 Second Avenue, S.W., Rochester, Minn.
D. S. CHILDS, Syracuse, N. Y.
A. C. CHRISTIE, Washington, D. C.
EDWIN C. ERNST, St. Louis.
EDWARD L. JENKINSON, Chicago.
LYELL C. KINNEY, San Diego, Calif.
U. V. PORTMANN, Cleveland.
DOUGLAS QUICK, New York.
LEROY SANTE, St. Louis.
E. H. SKINNER, Kansas City, Mo.
M. C. SOSMAN, Boston.
ROLLIN H. STEVENS, Detroit.
BERNARD P. WIDMANN, Philadelphia.

HISTORY AND AUTHORITY FOR ORGANIZATION

The medical profession has long felt that there should be a standard of minimal requirements for the practice of any specialty in medicine in order to protect the public, the profession in general, and the specialists themselves. Some of the states have attempted by statute to prescribe such requirements in certain branches. Unless a better method of regulation were found, the other states would be likely to enact similar laws. The result would be forty-eight different standards for each of the many medical specialties. Obviously, a more practicable solution would be for each special group to put its own house in order and place its mark of approval on those qualified to practice as specialists in that particular field. Accordingly, in 1932, five nation-wide radiologic organizations, the Section on Radiology of the American Medical Association, the American Roentgen Ray Society, the Radiological Society of North America, the American College of Radiology, and the American Radium Society, each appointed a committee of three members to confer and investigate the feasibility of establishing a quali-

fying board. The following men were appointed by these five organizations: Drs. G. W. Holmes, J. W. Pierson, E. L. Jenkinson, W. E. Chamberlain, E. C. Ernst, W. F. Manges, L. R. Sante, L. C. Kinney, A. C. Christie, Albert Soiland, W. W. Wasson, Henry Schmitz, Lester Hollander, Rollin H. Stevens and B. R. Kirklin.

This combined committee met at Milwaukee in 1933, during the meeting of the American Medical Association, agreed unanimously that such a board should be established and so reported to the respective organizations. Each of the organizations approved the report, appointed three representatives, and empowered them to proceed to the formation of a national radiologic board. The members of the board thus chosen were: Drs. W. F. Manges, L. R. Sante and B. R. Kirklin, representing the American Roentgen Ray Society; Drs. A. C. Christie, E. C. Ernst and E. L. Jenkinson (succeeding Dr. Byron H. Jackson, originally appointed) representing the American College of Radiology; Drs. R. H. Stevens, Henry Schmitz and H. K. Pancoast, representing the American Radium Society; Drs. L. J. Menville, M. C. Sosman and Albert Soiland, representing the Radiological Society of North America, and Drs. L. C. Kinney, J. W. Pierson and G. W. Holmes, representing the Section on Radiology of the American Medical Association.

The board was incorporated, organized and held its first meeting in Washington, D. C., in May 1934; at that time the by-laws were adopted and provision was made by resolution for its proper function. The officers of the board elected at this meeting were:

Dr. H. K. Pancoast, President.
Dr. A. C. Christie, Vice President
Dr. B. R. Kirklin, Secretary-Treasurer.

This move put into action the determined effort on the part of these five national organizations to improve the standards of the practice of radiology. It expects to accomplish this by various activities, such as the investigation and encouragement of facilities for graduate extension study and active clinical assistantships for men desiring to specialize in radiology; it will endeavor by regular examinations to determine the competence of specialists in radiology who apply for the certificate.

During 1935 the American Board of Radiology was accepted for membership in the Advisory Board for Medical Specialties and was also approved by the Council on Medical Education and Hospitals of the American Medical Association. Hereafter the list of Diplomates of the Board will take the place of the Council's list of approved radiologists, and the latter list will be discontinued.

PURPOSES

First: To encourage the study and promote and regulate the practice of radiology.

Second: To elevate the standards and advance the cause of radiology by encouraging its study and improving its practice.

Third: To determine the competence of specialists in radiology; to arrange, control and conduct investigations and examinations; and to test the qualifications of voluntary candidates for certificates to be issued by the board.

Fourth: To serve the public, physicians, hospitals and medical schools by preparing lists of practitioners who shall have been certified by the board.

VALUE OF CERTIFICATE

The national radiologic organizations which have participated in the formation of the board and are sponsoring its activities, as well as other organizations, attach considerable importance to its certificate. It is expected that both the medical and the lay public, including hospital directors, will soon come to utilize the certificate from this board as a means of discriminating between those who are well grounded as specialists in radiology and those who are not.

To this end lists of those holding certificates from this board will be published and issued from time to time by the board. Similar lists will be published by the *American Journal of Roentgenology and Radium Therapy, Radiology,* and *The Journal of the American Medical Association.* The Directory of the American Medical Association will indicate by a numerical symbol in the biographic data of those whose names are eligible to appear on these lists that they are diplomates of this board.

For emphasis it is repeated that the board does not intend in any way to interfere with or limit the professional activities of any duly licensed physician, but it does aim toward standardized qualifications for those who claim to be specialists in radiology.

CERTIFICATES

A certificate will be issued to each candidate who meets the requirements of the board, to the effect that the holder of the certificate has had adequate training in radiology and has successfully fulfilled the requirements of the board.

A certificate granted by this board does not of itself confer, or purport to confer, any degree, or legal qualifications, privileges, or license to practice radiology. Certificates of the board shall be issued upon one of two forms:

1. A certificate to the effect that the applicant has been found qualified to practice radiology in all its branches.

2. A certificate to the effect that the applicant has been found qualified to practice radiology in one or more of the following special fields: (a) roentgenology; (b) diagnostic roentgenology; (c) therapeutic radiology.

DEFINITIONS

For the purposes of this board, the following definitions are adopted:

1. Radiology is that branch of medicine which deals with the diagnostic and therapeutic application of radiant energy including roentgen rays and radium.

2. Roentgenology is that branch of radiology which deals with diagnostic and therapeutic application of roentgen rays.

3. Diagnostic roentgenology is that branch of radiology which deals with the diagnostic application of roentgen rays.

4. Therapeutic radiology is that branch of radiology which deals with the therapeutic application of roentgen rays and radium.

GENERAL REQUIREMENTS

Each applicant for admission to the examination shall be required to present evidence that he has met the following standards:

(A) General Qualifications.*

(1) Satisfactory moral and ethical standing in the profession.

(2) A license to practice medicine.

(3) Membership in the American Medical Association, or, by courtesy, membership in such Canadian or other medical societies as are recognized for this purpose by the Council on Medical Education and Hospitals of the American Medical Association.

(4) That the applicant holds himself out to be a specialist in radiology or one of its branches as defined under definitions, and that he uses roentgen rays or roentgen rays and radium either personally or under his direct supervision in a substantial portion of his practice.

(B) Professional Education.*

(1) Graduation from a medical school of the United States or Canada, recognized by the Council on Medical Education and Hospitals of the American Medical Association.

(2) Completion of an internship of not less than one year in a hospital approved by the same council.

(3) Three years' training in radiology or sufficient experience in lieu thereof.

(C) Special Training.* (To be effective Jan. 1, 1942.)

(1) A period of study after the internship of not less than three calendar years in an institution or radiologic department recognized by the same council and the board as competent to provide a satisfactory training in the field of radiology.

(2) This period of specialized preparation shall include:

(a) Graduate training in pathologic anatomy, radiophysics, and radiobiology.

(b) An active experience of not less than twenty-four months in a radiologic department recognized by the board and the council as capable of providing satisfactory training.

(c) Examination in the basic sciences of radiology as well as in the clinical aspects thereof.

APPLICATIONS

The board desires to appraise the candidate's educational opportunities (premedical, medical and radiologic), the ability of his instructors, his hospital and teaching positions, his original investigations, his contributions to radiologic literature, his membership in medical societies, and his local and general reputation.

For this purpose, application must be made on a special blank which may be obtained from the secretary. No application will be considered unless made on the regular application blank. This application shall be forwarded with the required data, two unmounted photographs, and the fee of $35, at least two months before the date of the examination.

FEE

A fee of $35 must accompany each application blank. This fee will not be returned and no application will be considered until the fee is received. This fee has been carefully computed

* NOTE: In case of an applicant whose training has been received outside of the United States and Canada, the credentials must be satisfactory to the Advisory Board for Medical Specialties.

and is used entirely for administrative purposes. Members of the board and special examiners do not receive any compensation except for actual expenses connected with holding the examinations. As the number of candidates decreases, it may become necessary to raise the fee.

Checks should be made payable to the American Board of Radiology.

EXAMINATIONS

Each year the board will hold an examination in conjunction with the annual meeting of the American Medical Association, and, when sufficient applications are on file, a second examination will be held in conjunction with the annual meeting of the American Roentgen Ray Society and/or the Radiological Society of North America.

For the present, examinations consist of practical and oral examinations, although written examinations may be added later. The examinations are designed to test the candidate's fitness to practice radiology or one of its branches as a specialty. The board will endeavor to adapt this examination to the candidate's experience and years of practice. It will try especially to ascertain the breadth of his clinical experience, his knowledge of the basic sciences of radiology, and likewise his knowledge of the recent literature on radiology, and his general qualifications as a specialist in this branch of medicine.

The examination consists of tests in film interpretation and an oral examination in pathology, physiology, radiophysics and radiobiology, as well as the clinical applications of roentgen rays and radium. The applicant is also examined in "professional adaptability," in an attempt to ascertain his attitude toward his fellow practitioners and his patients.

Whenever an applicant fails to pass the examination, the board, if requested, will make suggestions as to suitable courses of instruction for the purpose of overcoming his deficiencies.

REEXAMINATIONS

If the candidate fails in an examination he will be admitted to a second examination after one year has elapsed but not more than three years. He must give sixty days' notice of his intention to appear for reexamination and pay an additional fee of $15. If a candidate who has failed does not appear for reexamination before the expiration of three years, he will be required to make a new application and pay an additional fee of $35.

A candidate having failed twice must file a new application and pay an additional fee of $35.

FINAL ACTION OF THE BOARD

The final action of the board is based on the applicant's professional record, training, and attainments in the field of radiology, as well as on the results of his examination. Any radiologist who is practicing radiology honorably and efficiently should have no difficulty in obtaining a certificate. This board has been organized, not to prevent qualified radiologists from obtaining certificates, but to assist them in becoming recognized in their communities as men competent to practice in the special field of radiology.

REVOCATION OF CERTIFICATES

Certificates issued by this board are subject to the provisions of the Articles of Incorporation and the By-Laws. According to Article IX, Section 4, of the By-Laws "Any certificate issued by the Board of Trustees shall be subject to revocation in the event that:

(a) The issuance of such certificate or its receipt by the physician so certified shall have been contrary to or in violation of any provision of the Certificate of Incorporation of this the American Board of Radiology or of these by-laws; or

(b) The physician or party so certified shall not have been eligible in fact to receive such certificate; or

(c) The physician or party so certified shall have made any mis-statement of fact in his application or in any other communication to the board or its representatives; or

(d) The physician or party so certified shall have been convicted by a court of competent jurisdiction of a felony or of any misdemeanor involving, in the opinion of the Board of Trustees, moral turpitude; or

(e) If the physician or party so certified shall have had his license to practice medicine revoked or shall have been expelled from one of the societies or organizations which is represented by this corporation through eligibility of such society or organization to nominate and appoint members of this corporation."

Communications should be addressed to the secretary.

AMERICAN BOARD OF SURGERY, Inc.

ALLEN O. WHIPPLE, Chairman, New York.
FRED W. RANKIN, Vice Chairman, Lexington, Ky.
J. STEWART RODMAN, Secretary-Treasurer, 225 South Fifteenth Street, Philadelphia.
EDWARD D. CHURCHILL, Boston.
FREDERICK A. COLLER, Ann Arbor, Mich.
VERNON C. DAVID, Chicago.
ARTHUR W. ELTING, Albany, N. Y.
THOMAS M. JOYCE, Portland, Ore.
THOMAS G. ORR, Kansas City, Mo.
ROBERT L. PAYNE, Norfolk, Va.
ERWIN R. SCHMIDT, Madison, Wis.
PHILEMON E. TRUESDALE, Fall River, Mass.

HISTORY

The organization of the American Board of Surgery was completed on Jan. 9, 1937. A plan for this organization had been carefully studied by a general committee representative of certain general and sectional surgical societies called together through the initiative of the American Surgical Association. As a result of the deliberations of this general committee a tentative plan of organization was adopted. This plan was reported to the cooperating surgical societies and was approved with the understanding that the board, when organized, would have the power to change or modify the proposed plan as it saw fit. This board has been created in accordance with the action of the Advisory Board for Medical Specialties as approved by the Council on Medical Education and Hospitals of the American Medical Association, which has named certain specialty fields as being suitable to be represented by such boards. These boards have the twofold purpose of certifying those found to be qualified after meeting reasonable requirements, and of improving existing opportunities for the training of specialists within the field concerned. This is to be done for the protection of the public and the good of the specialty.

PERSONNEL

* The cooperating surgical societies selected jointly to form the board appointed their representatives as follows:

The American Surgical Association	3
The Surgical Section of the A. M. A.	3
The American College of Surgeons	3
The Southern Surgical Association	1
The Western Surgical Association	1
The Pacific Coast Surgical Association	1
The New England Surgical Society	1
	13

The term of membership is for six years. Each cooperating association has the appointing power of its representatives subject to the approval of the board.

PURPOSES

(a) To conduct examinations of satisfactory candidates who seek qualification by the Board.

(b) To issue certificates of qualification to all those meeting the board's requirements.

(c) To improve the opportunities for the training of the surgeon.

REQUIREMENTS

(A) GENERAL QUALIFICATIONS

1. Moral and ethical standing in the profession satisfactory to the board.

The board, believing that the practice of "fee splitting" is pernicious, leading as it does to a traffic in human life, will reserve the right to inquire particularly into any candidate's practice in regard to this question.

2. Membership in the American Medical Association or, by courtesy, membership in such Canadian or other medical societies as are recognized for this purpose by the Council on Medical Education and Hospitals of the A. M. A. Except as here provided, membership in other societies shall not be required.

3. Those who have limited their activities to the practice of surgery.

4. In exceptional instances the board may, in its discretion, accept for examination candidates who have met all preliminary requirements and have been in practice from six to sixteen years but whose formal training does not comply with the full requirements to be exacted in the future.

* The first three of these associations being national in scope, were allotted three representatives each, the remaining associations, one.

The board recognizes two groups of candidates who may be eligible for certification.

(A) The Founders Group—those who have already amply demonstrated their fitness as trained specialists in surgery. Application for membership in this group will be open until January 9, 1940. Those who receive the board's approval will be accepted for membership without examination from the following:

1. Those who from the time of the board's organization, January 9, 1937, hold the position of Professor or Associate Professor of Surgery in the approved medical schools of the United States or Canada.

2. Those who for fifteen years prior to the board's organization have limited their practice to surgery and have met the general qualifications required.

3. Such members of the cooperating societies represented on the board, in good standing January 9, 1937, who may be invited to membership in this group.

This group was closed January 1, 1940; no further applications received.

(B) Qualified by examination—

In addition to the general qualifications the requirements for this group shall be as follows:

(a) Professional Standing

1. Graduation from a medical school of the United States or Canada recognized by the Council on Medical Education and Hospitals of the A. M. A., or graduation from an approved foreign school.

2. Completion of an internship of not less than one year in a hospital approved by the same Council, or its equivalent in the opinion of the board. This internship may be rotating or one devoted to a single branch of medicine as, for example, surgery, medicine, pathology, etc.

(c) Special Training

After the completion of the year's internship there shall be a period of special training in surgery of not less than five years. During this period one's entire time must be devoted to surgical training supplemented by sufficient experience in the basic sciences to comply with the provisions of Paragraph 2. Such training may be taken in a recognized graduate school of medicine, as resident in surgery in an acceptable hospital, or under a sponsorship accredited by the American Board of Surgery for such training.† By the latter statement is meant that one may secure the necessary training as an assistant to an accredited surgeon, provided suitable facilities for the education of the candidate are offered. It is understood that the board will accept a combination of training as outlined above.

(For example, one may take a graduate course in an acceptable graduate school for one year, a residency of two years, and an assistantship of two years.)

This period of special training shall be of such character that the relation of the basic sciences of anatomy, physiology, pathology, bacteriology and biochemistry is emphasized. Knowledge of these sciences as applied to clinical surgery will be required in the examination.

Adequate operative experience in which the candidate has assumed the whole responsibility will be required.

The above requirements, especially those referring to surgical training, are subject to change from time to time as the existing opportunities for training in this field of specialization may be broadened.

EXAMINATIONS

The qualifying examination will be divided into Part I (written) and Part II (clinical, bedside and laboratory). In both of these parts a knowledge of the practical application of the sciences fundamental to surgery will be required as previously stated.

Part I

This may be given simultaneously in as many centers as the board may determine suitable for the purpose. A candidate to be eligible for Part I must meet all requirements for Group B candidates. A card of admission to this part of the examination will be forwarded to the candidate from the secretary's office, certifying that these requirements have been met, as well as due notice as to the time and place of the examination.

The examination in Part I shall cover a one day period. There shall be two sessions of three hours each. This written examination shall concern itself primarily with general surgical problems and in addition the application of the basic sciences of surgery to these problems.

† The board makes no attempt to classify hospital residencies, usually accepting those approved by the American College of Surgeons and the Council on Medical Education and Hospitals of the American Medical Association.

Part II

In order to be eligible for Part II a candidate must have successfully passed Part I in addition to having met the necessary preliminary requirements and having presented definite evidence of an adequate training in operative surgery satisfactory to the board.

This part of the examination shall be oral and practical and cover a one-day period, the schedule being arranged somewhat as follows:

8-9 A. M.—Registration

9 A. M.–12 Noon.—Clinical Surgery (diagnosis and management and the application of physiology, biochemistry and bacteriology, as the case being examined on may offer an opportunity for doing so. X-ray plate interpretation will also be included).

2-5 P. M.—Applied anatomy and surgical pathology.

The examinations in Part II are conducted in certain centers of the country selected by the board. It is the board's desire to arrange these centers so as to geographically meet the needs of the candidates, provided suitable examination facilities can be met. The examination in this part will be conducted by members of the board living in the region of the country in which they are held, together with selected members of the Founders Group resident in the center chosen.

GRADES

A candidate must receive a passing average for each part to be entitled to the board's certificate. No candidate shall pass a part who does not receive a grade of 60% or over in each subject of such a part. An average grade of 75% shall be considered as passing in each part. The following values have been assigned to Part II on the basis of the total of 100%; clinical surgery 50%, anatomy 30%, pathology 20%.

A candidate who fails in his examination in Part I shall have his papers reviewed by the examination committee.

REEXAMINATIONS

Candidates may be reexamined as often as they desire provided one year shall elapse between examinations, except that the board may, for good and sufficient reason, deny a candidate the privilege of reexamination.

Candidates shall be required to pay the same fees for Parts I and II at each reexamination in these parts.

FEES

The fee for Group A, Founders Group, shall be $25.

The fee for Group B shall be $75, payable as follows: $5 registration fee, which shall be returned if the candidate is not accepted for examination; $20 for Part I; and $50 for Part II.

This board is a non-profit organization. All fees will be used, after a reasonable amount is set aside for necessary expenses in maintaining its office, conducting examinations, etc., to aid in improving existing opportunities for the training of the surgeon.

CERTIFICATE

A certificate attesting to a candidate's qualification in surgery after meeting the requirements will be issued by the board, having been signed by its officers.

REVOCATION OF CERTIFICATE

Any certificate issued by the board shall be subject to revocation by the board at any time in case it shall determine in its sole judgment that a candidate, who has received a certificate, either was not properly qualified to receive it or has become disqualified since its receipt.

Proper forms for making application, and other information, will be furnished by the secretary-treasurer.

AMERICAN BOARD OF UROLOGY, Inc.

Herman L. Kretschmer, President, Chicago.
Clarence G. Bandler, Vice President, New York.
Gilbert J. Thomas, Secretary-Treasurer, 1009 Nicollet Avenue, Minneapolis.
Nathaniel P. Rathbun, Brooklyn.
George Gilbert Smith, Brookline, Mass.
Charles C. Higgins, Cleveland.
Henry G. Bugbee, New York.
Alfred I. Folsom, Dallas, Texas.
Thomas Leon Howard, Denver.

ORGANIZATION

At the annual meeting of the American Association of Genito-Urinary Surgeons held at Niagara Falls, Ont., Canada, May 26-28, 1932, Dr. William F. Braasch called attention to the various qualification boards which had been established, or were

in the process of being established, for the certification of specialists. He suggested that a committee should be appointed from this organization to investigate the advisability of establishing a similar board for the specialty of urology. A committee consisting of Dr. Braasch as Chairman, Dr. Henry G. Bugbee, and Dr. Hugh H. Young was appointed. This committee reported to the society in 1933, was reappointed to continue its efforts, and was given the power to act.

At the meeting of the American Urological Association in 1933, Dr. George R. Livermore, in his presidential address, suggested that all candidates for specialization in urology should have some definite preparation, and should be required to take a thorough examination before being recognized as specialists in urology. Dr. Livermore appointed Dr. Joseph F. McCarthy, chairman; Dr. George Gilbert Smith, and Dr. Herman L. Kretschmer as a committee to study this suggestion.

At the annual meeting of the American Medical Association in Milwaukee, June 12-16, 1933, a committee consisting of Dr. Montague L. Boyd, chairman; Dr. A. I. Folsom and Dr. Frank Hinman was appointed to cooperate with similar committees from the American Association of Genito-Urinary Surgeons and the American Urological Association in the establishment of the American Board of Urology.

The first combined meeting of the committees from these three organizations was held on Oct. 11, 1933, in Chicago. Dr. Herman L. Kretschmer was made president; Dr. Joseph F. McCarthy, vice president; and Dr. William F. Braasch, secretary. These men were elected to serve as temporary officers. A permanent organization could not be effected, however, because the committee from the American Urological Association had not been given the power to act.

The second meeting of these committees was held in New York City, Feb. 2, 1934. Dr. Nathaniel P. Rathbun, president of the American Urological Association, was present at this meeting.

At the annual meeting of the American Urological Association held in Atlantic City, N. J., May 22-24, 1934, the committee reported the activities of the temporary "Board of Urology." This report, which contained suggestions for the guidance of future committees from this association, was accepted, and a new committee was elected by the association, and was given the power to act.

The permanent "American Board of Urology, Inc.," was organized at Chicago, Sept. 24, 1934. The committee members present from the American Association of Genito-Urinary Surgeons were: Dr. William F. Braasch, Dr. Henry G. Bugbee, and Dr. Gilbert J. Thomas; those from the American Urological Association were: Dr. Nathaniel P. Rathbun, Dr. Herman L. Kretschmer, and Dr. George Gilbert Smith; those from the Section on Urology of the American Medical Association were: Dr. A. I. Folsom, Dr. T. Leon Howard, and Dr. Clarence G. Bandler.

The officers of the board elected at this meeting were: Dr. Herman L. Kretschmer, president; Dr. Clarence G. Bandler, vice president; Dr. Gilbert J. Thomas, secretary-treasurer.

The board was incorporated May 6, 1935, and held its first legal meeting May 10, 1935.

PURPOSES

The first objective of the American Board of Urology, Inc., is to render better service to the public by insuring the competence of any physician or surgeon who is specializing, or who wishes to specialize, in the field of urology. It will elevate the standards and advance the cause of urology. It will investigate the curricula of medical schools, and will encourage adequate facilities for graduate instruction in urology.

FUNCTIONS

(a) The board will arrange to control and conduct examinations testing the qualifications of volunteer candidates.

(b) The board will grant and issue certificates or other evidence of special knowledge in the field of urology to voluntary applicants or to candidates for certification.

(c) The board will endeavor to serve the public, hospitals, medical schools, medical societies and practitioners of medicine and surgery by preparing lists of urologists whom it has certified.

LIMITATIONS OF FUNCTIONS

The conferring of degrees, "Doctor of Medicine" or "Bachelor of Medicine" remains with the universities, where it belongs, and this board makes no attempt to control the practice of urology by license, or legal regulations. This board does not intend in any way to interfere with or limit the professional activities of any duly licensed physician.

REASON FOR APPLYING FOR A CERTIFICATE; ITS VALUE

The American Urological Association, the American Association of Genito-Urinary Surgeons, and the Section on Urology of the American Medical Association are interested in furthering the cause of urology and have participated in the formation of this board. They are sponsoring its activities. The various national medical societies, the public, hospital directors and others, will utilize the certification from this board as a means of discriminating between those well grounded as specialists in urology, and those who are not.

Lists of individuals who have certificates from this board, and who are engaged in the practice of urology may be published in the Directory of the American Medical Association and will be published in a booklet issued from time to time by the American Board of Urology, Inc. The directory of the American Medical Association may indicate, by symbols in the biographical data, those whose names are eligible to appear on the list of diplomates of this board.

Application for this certificate is purely voluntary. There is only one type of certificate. No indication is given as to whether or not the candidate received his certificate with or without examination. All certificates are identical.

The Advisory Board for Medical Specialties working in conjunction with, and reporting to, the Council on Medical Education and Hospitals of the American Medical Association, has set certain standards of preparation for specialization which the American Board of Urology, Inc., wishes to adopt. The advisory board has drawn from the experience of all the present functioning boards, and has been of inestimable assistance in the formulation of the Constitution and By-Laws for the Board of Urology. Other organizations which now successfully operate boards of certification are:

The American Board of Ophthalmology, the American Board of Otolaryngology, the American Board of Obstetrics and Gynecology, the American Board of Dermatology and Syphilology, the American Board of Pediatrics, the American Board of Psychiatry and Neurology, the American Board of Radiology, the American Board of Orthopedic Surgery, the American Board of Internal Medicine, the American Board of Pathology and the American Board of Surgery. Among the organizations cooperating with the Advisory Board for Medical Specialties are: the Association of American Medical Colleges, the American Hospital Association, the Federation of State Medical Boards of the U. S. A., and the National Board of Medical Examiners.

APPLICATION BLANK: REQUIREMENTS FOR ALL APPLICANTS

Application for certification must be made on a special blank. This will be provided by the secretary and must be returned to him accompanied by other required data and credentials, and by $15 of the examination fee.

Requirements for Applicants. (Article VIII, Section 2, of the By-Laws of the American Board of Urology, Inc.)

Each applicant, before he shall become eligible to take the examination for certification in urology, must:

A. Have graduated from a medical school of the United States or Canada recognized by the Council on Medical Education and Hospitals of the American Medical Association, and must have completed an internship of not less than one year in a hospital approved by the same council. (The former requirement is not applicable to a candidate who graduated from an institution now extinct, or whose graduation occurred before the American Medical Association had prepared a list of accredited medical schools.) All graduates of foreign medical schools must obtain a license in the state in which they propose to practice medicine and the certificate of the National Board of Medical Examiners before making application for certification.

B. Establish in a manner satisfactory to this board that he is a physician duly licensed by law to practice medicine, that he is of high ethical and professional standing and that he has received adequate special training in urology.

The board is attempting to increase and to standardize the facilities for urological training in teaching institutions, so that the expression "special training in Urology" may be interpreted to include:

1. A period of study, after the internship, of not less than three years in clinics, dispensaries, hospitals or laboratories recognized by the Council on Medical Education and Hospitals of the American Medical Association as competent to provide a satisfactory training in the special field of Urology.

This period of specialized preparation should include:

(*a*) graduate training in anatomy, physiology, pathology, and the other basic medical sciences which are necessary to the proper understanding of the disorders and treatment involved in the specialty of Urology.

(*b*) an active experience of not less than eighteen months in hospital clinics, dispensaries and diagnostic laboratories recognized by the Council on Medical Education and Hospitals of the American Medical Association as competent in the diagnosis and treatment of urologic conditions.

(c) examinations in the medical sciences basic to the specialty of Urology, as well as in the clinical, laboratory and public health aspects.

2. An additional period of not less than two years in the private practice of urology in the city from which he makes application.

These special requirements conform with the suggestions made by the Council on Medical Education and Hospitals of the American Medical Association.

C. Make application to the American Board of Urology, Inc., whose duty it shall be to investigate the applicant's credentials and make a survey of his character;

D. Assure the board that he is engaged in the practice of urology and that he intends to continue to be so engaged;

E. Membership in the American Medical Association, or comparable national medical society, is recommended.

FEE

The examination fee will be $75. Fifteen dollars must accompany the application. Sixty dollars is to be paid when the applicant is accepted as a candidate for certification. This is the total expense to the candidate. If a candidate fails in his examination, he will be permitted a second examination after one year, or within three years, without additional fee, but he must give sixty days' notice of his intention to appear for reexamination. After an applicant has failed twice, he must file a new application blank accompanied by a second fee. If an applicant is lacking in any of the requirements as stated above, he will be considered ineligible for examination and classification and his fee will be returned. In no other instance, however, will a refund of the examination fee be possible.

REQUIREMENTS FOR CERTIFICATION

According to the By-laws of the American Board of Urology, Inc., applications received from applicants for certification shall be examined by the Credentials Committee and reviewed by the board. When additional data are required to complete the application, these will be requested by the secretary's office.

The requirements for certification include: personal appearance before the board; preparation of fifty case reports of major urological cases under the candidate's own supervision which must contain all items essential for diagnosis, therapy, prognosis, results of treatment, etc.; oral and clinical examinations; written examinations.

In specific instances, the board may waive any part of these requirements, with the exception of the item of personal appearance.

Each candidate will receive a notice of the time and place of the examinations, and an appointment for his personal appearance before the board.

EXAMINATIONS, WHERE HELD, AND REPORTS OF CASE HISTORIES

The board will hold one examination a year. This will be held at a time or place that the board may select or deem expedient.

1. The *written examinations* are designed to test the candidate's preparation in, and his knowledge of, the whole subject of urology, including the fundamental subjects: pathology, anatomy, physiology, embryology, bacteriology, physiological chemistry and endocrinology. The examination in pathology will consist of the identification of gross specimens and of sections of tissue observed through the microscope. The examination in anatomy, physiology, embryology, bacteriology, physiological chemistry, and endocrinology will be a test of the candidate's working knowledge of these subjects as they are related to the practice of urology.

2. The oral and clinical examinations will consist of discussions of common urologic conditions. The subjects forming the basis of the oral examinations are urography, diseases of the genital organs, including the prostate, diseases of the urinary bladder, and diseases of the ureters and kidneys. The oral examination may deal directly with the reports of case histories which the candidate has submitted. This examination will ascertain the candidate's familiarity with recent urologic literature, the breadth of his clinical experience, and his general qualifications as a specialist in urology. The applicant also will be examined in "professional adaptability" in an attempt to ascertain his attitude toward his fellow practitioners and his patients.

3. The *reports of fifty major urological cases* must be consecutive and must have been under the candidate's own supervision. They must not be abstracted. Sufficient data should appear in these so the examiner will know that a proper history was taken and that a thorough examination, including a complete physical survey, was made.

Case reports that are copied verbatim from a hospital record are not desired. They must be identified by the name of the hospital and the case admission numbers, with the pertinent dates. The reports must be typewritten (on 8½ by 11 inch paper) and in duplicate, but need not be on any special forms.

The data should be placed under proper headings and the arrangement of these should conform to the sequence of events incidental to the patient's admission to the hospital or clinic, the examinations made and treatment prescribed.

Each candidate must assume personal responsibility for the data in his case reports, including autopsy findings and interpretations of urograms. If the reports are prepared by record clerks, interns, or fellows, they should be reviewed by the candidate and careful attention given to the spelling and the correct use of medical terms before submitting them to the secretary of the board. Case reports are documentary evidence of a candidate's method of practice, and the data in them and the manner in which these are presented reflect this.

Satisfactory case reports must be submitted before a candidate will be permitted to continue with other parts of his examination. If case reports are pronounced unsatisfactory by more than one examiner, the candidate will be informed of this and requested to prepare others. Criticisms and unsatisfactory reports will be sent to the candidate upon request.

Case reports must be submitted to the secretary of the board at least ninety days before the time set for the oral-clinical examination.

Although the board requires that all the essential points of the history and examination be given, as well as a complete description of the surgical procedure, emphasis should be placed on the following items: preoperative diagnosis; clinical and pathological diagnosis; summary of postoperative course with special reference to morbidity; clinical findings at time of discharge from the hospital and subsequent "follow-up" reports.

A final short paragraph must be prepared for each case by the candidate. These data must include the candidate's interpretation of the history in terms of pathology; the basis for the diagnosis; the facts that determined the treatment prescribed, whether surgical or otherwise; the course of treatment to be pursued following discharge from the hospital or clinic; a critical discussion of the knowledge gained from the proper handling of the case, or from the errors made (if any) in the diagnosis and method of treatment.

Complete separate index lists of the case history reports submitted must accompany the records. If the reports are obtained from more than one hospital they must be consecutive, as mentioned before, and a separate complete index list of each group of reports should be provided. These lists must state the operator's name at the head of each page, the name of the patient, the hospital and admission number, and the date of operation. The lists will be filed in the secretary's office for verification purposes.

Case reports will be reviewed by examiners living in localities other than those where the candidates practice.

FINAL ACTION

Final action is based on the applicant's training, his professional record, his attainments in the field of urology, and the results of the examinations. Any well trained urologist will have no difficulty in obtaining the board's certification. This board is organized not to prevent qualified urologists from obtaining certificates, but to assist them in becoming recognized in their communities as men competent to practice in the special field of urology.

The activities described above proceed from the certificate of incorporation in which is stated the nature of the business, objects, and purposes proposed to be transacted and carried out by this corporation.

REVOCATION OF CERTIFICATE

Certificates issued by this board are subject to the provisions of the Articles of Incorporation and the By-laws. According to Article IX, Section 4, of the By-laws, "each certificate may be revoked in the event that:

(a) The issuance of such certificate or its receipt by the physician so certified shall have been contrary to, or in violation of, any provision of the Certificate of Incorporation of this, the American Board of Urology, Inc., or of the By-laws; or

(b) The physician or party certified shall not have been eligible to receive such certificate, irrespective of whether or not the facts constituting him so ineligible were known to, or could have been ascertained by, the directors of the board at the time of the issuance of such certificate; or

(c) The physician or party so certified shall have made any misstatement of fact in his application for such certificate or in any other statement or representation to the board or its representatives; or

(d) The physician so certified, at any time while continuing to practice, shall cease to practice urology; or

(e) The physician so certified shall at any time have neglected to maintain the degree of competency in the practice of the specialty of urology as set up by the board, and shall refuse to submit to reexamination by the board.

The Board of Trustees of this Corporation shall have the sole power, jurisdiction and right, to determine and decide whether or not the evidence or information before it is sufficient to constitute one of the grounds for revocation of any certificate issued by this corporation, and the decision of such Board of Trustees in the premises shall be final."

Communications should be addressed to the secretary-treasurer.

THE AMERICAN BOARD OF PLASTIC SURGERY, INC.

JOHN STAIGE DAVIS, Chairman, Baltimore.
GEORGE M. DORRANCE, Vice Chairman, Philadelphia.
VILRAY P. BLAIR, Secretary-Treasurer, 400 Metropolitan Building, St. Louis.
GUSTAVE AUFRICHT, New York.
JAMES BARRETT BROWN, St. Louis.
ROBERT H. IVY, Philadelphia.
HAROLD L. D. KIRKHAM, Houston, Tex.
WILLIAM S. KISKADDEN, Los Angeles.
SUMNER L. KOCH, Chicago.
WILLIAM E. LADD, Boston.
GORDON B. NEW, Rochester, Minn.
GEORGE WARREN PIERCE, San Francisco.
ERNEST FULTON RISDON, Toronto, Ont., Can.
FERRIS SMITH, Grand Rapids, Mich.
JEROME P. WEBSTER, New York.

HISTORY

The American Board of Plastic Surgery, tentatively organized in June 1937, by representatives of widely distributed groups interested in this special type of surgery, received recognition as a subsidiary of the American Board of Surgery in May 1938, and was given the status of a major board in May 1941 by the Advisory Board for Medical Specialties. It is composed of representatives from the American Association of Oral and Plastic Surgeons, the Surgical Section of the American Medical Association, the American Surgical Association, the Southern Surgical Association and the American College of Surgeons.

The aim of the American Board of Plastic Surgery is to encourage the study, improve the practice, and advance the cause of plastic surgery, and to grant and to issue certificates of recognition of special knowledge in plastic surgery to surgeons meeting the requirements.

PURPOSES OF THE BOARD

The purposes of the board are:

1. To elevate and establish standards of fitness to practice plastic surgery.

2. To arrange and conduct examinations for determining the qualifications of those who request a certificate of their ability in the field of plastic surgery, to establish qualification requirements for applicants, and to confer certificates upon those who meet the requirements of the board.

3. To improve and widen the existing opportunities for the training of the plastic surgeon.

4. To study and evaluate local and foreign teaching centers and opportunities for experience in and the study of plastic surgery.

5. The action or decision of the American Board of Plastic Surgery regarding certification of any candidate shall be final.

GENERAL QUALIFICATION REQUIREMENTS

1. Moral and ethical standing in the profession satisfactory to the board.

2. Membership in the American Medical Association, or, by courtesy, membership in such Canadian or other medical societies as are recognized for this purpose by the Council on Medical Education and Hospitals of the American Medical Association.

PROFESSIONAL QUALIFICATION REQUIREMENTS

1. Graduation from a medical school recognized by the Council on Medical Education and Hospitals of the American Medical Association.

2. Completion of an internship of not less than one year in a hospital approved by the said Council, or what would constitute, in the opinion of the board, the equivalent of such training.

For certification in the field of plastic surgery, the following special training shall be required:

(a) A period of graduate study in surgery of not less than two years beyond the intern year to be taken in a recognized graduate school or hospital.

(b) An additional period of not less than two years of graduate study in plastic surgery, also to be taken in a recognized graduate school or hospital. This period of training shall cover the technical and clinical phases of plastic surgery, and the basic sciences of anatomy, physiology, pathology, bacteriology, and biochemistry as they are related to plastic surgery.

(c) An additional period of two years study and/or practice in plastic surgery.

The above training may be taken in a recognized graduate school of medicine, or as resident in surgery in an acceptable hospital, or under a sponsorship accredited by the American Board of Plastic Surgery for such training. By the latter statement is meant that one may secure the necessary training as an assistant to an accredited surgeon, provided suitable facilities for the education of the candidate are offered. It is understood that the board will accept a combination of such training as outlined above; for example, one may take a graduate course in an acceptable graduate school for one year, a residency for two years, and an assistantship in plastic surgery for two years. Where circumstances permit the applicant to major in plastic surgery during the second of the two years on a general surgical service, the second year of the two years of general training may, with the approval of this board, be credited on his period of special training in plastic surgery.

In exceptional instances, the board may, at its discretion, accept for examination candidates who have met all the above preliminary requirements, have been graduated in medicine at least ten years but whose formal training does not comply with the full requirements to be exacted in the future.

CLASSIFICATION OF APPLICANTS

Until June 1, 1942* applicants for certification shall be classified as follows:

Group A—Founders' Group.—Those to be certified without formal examination as to professional qualifications. This group shall be composed of men who have already amply demonstrated their fitness to do acceptable plastic surgery and who have been graduated in medicine at least ten years.

Group B—Examinees' Group.—Those to be formally examined as to professional qualifications. To be eligible for examination by this board, all candidates shall be required to possess the preliminary and basic medical qualifications accepted by the Advisory Board for Medical Specialties as applied to all specialties.

Applicants who have qualified under Group B shall be required to submit twenty-five diversified case reports, together with photographs of before and after treatment made from unretouched negatives.

EXAMINATIONS

The qualifying examination will be divided into Part I, written, and Part II, oral and practical.

Part I shall consist of a written examination upon questions prepared by the examining committee which concern the theory and practice of plastic surgery. In addition to the above, the examination shall include questions upon applied anatomy, applied physiology, pathology, clinical laboratory methods, local and general anesthesia, shock, hemorrhage, the handling of tissues, wound healing, related bacteriology, and surgical accidents, all as related to plastic surgery.

Part II shall, as far as possible, be of a practical nature, and shall be conducted by no fewer than two competent judges, selected by the examining committee.

The clinical examination shall include any or all of the following:

(a) The exhibition of patients who have undergone or who are undergoing treatment.

(b) Examination, diagnosis, and presentation of a plan of correction by the applicant of cases provided by the examiners.

(c) Oral examination of the applicant and observations made in the operating room, treatment rooms, and wards.

In order to be eligible for Part II of the examination, a candidate shall have successfully passed Part I.

A candidate shall be required to receive a passing average for each Part in order to receive the board's certificate. No candidate shall pass Part I or Part II of the examination who does not receive a grade of 65 per cent or over in each subject of each Part. An average grade of 75 per cent shall be considered as passing.

* At the discretion of the board this closing date for the Founders' Group may be extended until June 1, 1943.

REEXAMINATIONS

Candidates may be reexamined as often as they desire, provided that one year shall elapse between examinations, except in such case as the board may, for good and sufficient reason, deny a candidate the privilege of reexamination.

FEES

The fee for the examination and the certificate of the American Board of Plastic Surgery is $100. Of this sum $25, which is not returnable, must accompany the case reports; $25 should be paid when Part I of the examination is taken, and $50 when Part II is taken. There shall be no refunds.

This fee may be increased at the discretion of the board, when the number of candidates decreases and when the expenses of the examinations and other activities of the board demand.

This board is a nonprofit organization. The fees of candidates are used solely for defraying the actual expenses of the board. The members of the board and their associates receive no emoluments. All surplus moneys derived from fees will be used to aid in improving existing opportunities for the training of plastic surgery.

The fee for the Founders' Group is $50.

CERTIFICATION

A certificate, bearing the seal of the board and the signatures of its officers, will be issued to each successful candidate attesting his qualification in plastic surgery.

REVOCATION OF CERTIFICATE

The American Board of Plastic Surgery shall have the sole power, jurisdiction, and right to determine and decide whether or not the evidence or information placed before it is sufficient to constitute grounds for revocation of any certificate issued by the board, and the decision of the board in the premises shall be final.

AMERICAN BOARD OF NEUROLOGICAL SURGERY, INC.

HOWARD C. NAFFZIGER, Chairman, San Francisco.
ALFRED W. ADSON, Vice-Chairman, Rochester, Minn.
R. GLEN SPURLING, Secretary-Treasurer, 404 Brown Building, Louisville, Ky.
PAUL C. BUCY, Chicago.
WINCHELL MC.K. CRAIG, Rochester, Minn.
LEO M. DAVIDOFF, Brooklyn.
LOYAL DAVIS, Chicago.
TEMPLE S. FAY, Philadelphia.
MAX M. PEET, Ann Arbor, Mich.
TRACY J. PUTNAM, New York.
ERNEST SACHS, St. Louis.
BYRON STOOKEY, New York.

ORGANIZATION

Recognizing the need for detailed training and special qualifications for the practice of neurological surgery, representatives of both the Society of Neurological Surgeons and the Harvey Cushing Society held an informal meeting in Chicago on March 27, 1939, to consider the advisability of the formation of a national certification board. Later the group was enlarged by representatives from the Section on Nervous and Mental Diseases of the American Medical Association, the Section on Surgery of the American Medical Association, the American Neurological Association, and the American College of Surgeons. Approval of the board by the Advisory Board for Medical Specialties and the Council on Medical Education and Hospitals of the American Medical Association was given. The American Board of Neurological Surgery was incorporated in the State of Delaware on Aug. 1, 1940.

The membership of the corporation was nominated as follows: five from the Society of Neurological Surgeons, three from the Harvey Cushing Society, one each from the American College of Surgeons, the Section on Nervous and Mental Disease of the American Medical Association, the Section on Surgery of the American Medical Association, and the American Neurological Association.

PURPOSES

A. To encourage the study, improve the practice, elevate the standards and advance the science of neurological surgery and thereby to serve the cause of public health.

B. To grant and issue to physicians duly licensed by law, certificates or other recognition of special knowledge in neurological surgery and to suspend and revoke the same.

C. Certificates granted or issued by the corporation shall not confer or purport to confer on any person any legal qualification, privilege or license to practice neurological surgery, nor purport to be issued under or in pursuance to or by virtue of any statutory or governmental sanction or authority.

D. To determine by examination, investigation and otherwise the fitness and competence of specialists in neurological surgery who shall apply for certificates and to prepare, provide, control and conduct examinations, written, oral and otherwise, for such purpose and to determine the results of such examination.

E. To furnish to the public, hospitals, medical schools, medical societies and practitioners of medicine and surgery lists of neurological surgeons who from time to time have been granted certificates by this corporation.

GENERAL REQUIREMENTS

A. General qualifications.

1. Satisfactory moral and ethical standing in the profession.

2. License to practice medicine.

3. Membership in the American Medical Association or, by courtesy, membership in such Canadian or other medical societies as are recognized for this purpose by the Council on Medical Education and Hospitals of the American Medical Association.

4. That the surgical activity of the applicant shall be limited to neurological surgery.

B. Professional education.

1. Graduation from a medical school of the United States or Canada recognized by the Council on Medical Education and Hospitals of the American Medical Association, or graduation from a foreign school which is acceptable to the American Board of Neurological Surgery, Inc.

C. Special training, to be effective Jan. 1, 1940.

1. Completion of a surgical internship of not less than one year in a hospital approved by the Council on Medical Education and Hospitals of the American Medical Association, or its equivalent in the opinion of the board.

2. A period of graduate study in a recognized graduate school of medicine of not less than three years beyond the intern year, or in an approved hospital or under a sponsorship acceptable to the American Board of Neurological Surgery, Inc., for the training of neurological surgeons. This period of special training shall be of such a character that the relation of the basic sciences of anatomy, physiology, pathology, bacteriology and biochemistry is emphasized. Knowledge of these sciences as applied to the practice of neurological surgery will be required in the examination.

3. An additional period of not less than two years in the practice of neurological surgery.

D. Certification without examination.

1. On invitation by the board and written application made within two years from Jan. 1, 1940, the following may be accepted as eligible for certification upon approval of the board of directors and on the production of evidence of satisfactory moral and ethical standing in the profession.

(*a*) Individuals of professorial rank in approved medical schools of the United States or Canada whose surgical practice is limited to neurological surgery.

(*b*) Those who have specialized in neurological surgery for ten years prior to Jan. 1, 1940.

APPLICATION BLANK AND FEE

Application must be made on the special form which may be procured from the secretary. The application and examination fee for candidates is $75 whether certified with or without examination. The completed application form should be returned to the secretary accompanied by an application fee of $25. When notified by the secretary that he is eligible for examination he shall send the examination fee of $50 to the secretary-treasurer at least two weeks before the date of examination. The application fee will be returned if the candidate is not accepted by the board for examination.

A candidate who has failed in one examination is eligible to reexamination in the subject, or subjects, in which he failed, within three years, on payment of a reexamination fee of $10. A candidate who has failed in one examination and who does not apply for reexamination within three years or a person who has applied within that time but who has failed a second time will be considered a new applicant.

EXAMINATIONS

Examinations will be held in the spring and fall of each year at or near the time and place of a national meeting at the discretion of the board. Examinations will be oral and based upon broad principles of neurological surgery. The subject matter of the examination will be divided into six parts: (1) neuroanatomy and neurophysiology, (2) neuropathology and

bacteriology, (3) ophthalmology and x-ray diagnosis, (4) neurosurgical problems, (5) organic neurology and (6) general surgery.

All communications should be addressed to the secretary-treasurer.

ADVISORY BOARD FOR MEDICAL SPECIALTIES

Organized 1933-1934 to coordinate graduate education and certification of medical specialists in the United States and Canada.

This Board reports directly to its member groups, and functions in close cooperation with the Council on Medical Education and Hospitals of the American Medical Association and with the Advisory Council on Medical Education.

The work of this Board has been aided by grants from the Josiah Macy Jr. Foundation of New York, but the Board is now supported by its component groups.

OFFICERS AND EXECUTIVE COMMITTEE

WILLARD C. RAPPLEYE, President, New York.
WILLIAM P. WHERRY, Vice President, Omaha.
C. GUY LANE, Secretary-Treasurer, 416 Marlboro Street, Boston.
R. C. BUERKI, Philadelphia.
WALTER B. LANCASTER, Hanover, N. H.

MEMBER ORGANIZATIONS AND REPRESENTATIVES

*(Corresponding Officer)

The Association of American Medical Colleges
DONALD C. BALFOUR, Rochester, Minn.
*WILLARD C. RAPPLEYE, New York.

The American Hospital Association
*R. C. BUERKI, Philadelphia.
RUSSELL H. OPPENHEIMER, Atlanta, Ga.

The Federation of State Medical Boards of the U. S. A.
G. M. WILLIAMSON, Grand Forks, N. D.
*WALTER L. BIERRING, Des Moines, Ia.

The National Board of Medical Examiners
*J. STEWART RODMAN, Philadelphia.
WALLER S. LEATHERS, Nashville, Tenn.

The American Board of Ophthalmology
*CONRAD BERENS, New York.
WALTER B. LANCASTER, Hanover, N. H.

The American Board of Otolaryngology
HARRIS P. MOSHER, Marblehead, Mass.
*WILLIAM P. WHERRY, Omaha.

The American Board of Obstetrics and Gynecology
JOSEPH L. BAER, Chicago.
*PAUL TITUS, Pittsburgh.

The American Board of Dermatology and Syphilology
HOWARD FOX, New York.
*C. GUY LANE, Boston.

The American Board of Pediatrics
BORDEN S. VEEDER, St. Louis.
*C. ANDERSON ALDRICH, Chicago.

The American Board of Psychiatry and Neurology
FRANKLIN G. EBAUGH, Denver.
*WALTER FREEMAN, Washington, D. C.

The American Board of Radiology
GEORGE W. HOLMES, Boston.
*BYRL R. KIRKLIN, Rochester, Minn.

The American Board of Orthopaedic Surgery
FREMONT A. CHANDLER, Chicago.
*GUY A. CALDWELL, New Orleans.

The American Board of Urology
HERMAN L. KRETSCHMER, Chicago.
*GILBERT J. THOMAS, Minneapolis.

The American Board of Internal Medicine
ERNEST E. IRONS, Chicago.
*WILLIAM S. MIDDLETON, Madison, Wis.

The American Board of Pathology
ARTHUR H. SANFORD, Rochester, Minn.
*FRANK W. HARTMAN, Detroit.

The American Board of Surgery
ERWIN R. SCHMIDT, Madison, Wis.
*J. STEWART RODMAN, Philadelphia.

The American Board of Anesthesiology
RALPH M. WATERS, Madison, Wis.
*PAUL M. WOOD, New York.

The American Board of Plastic Surgery
JOHN STAIGE DAVIS, Baltimore.
*VILRAY P. BLAIR, St. Louis.

The American Board of Neurological Surgery
HOWARD NAFFZIGER, San Francisco.
*R. GLEN SPURLING, Louisville, Ky.

FOREWORD

The Advisory Board for Medical Specialties has prepared these data for the purpose of furnishing general information regarding its activities in connection with graduate medical education and the certification of medical specialists in the United States and Canada. It is designed also to give detailed information concerning the procedure to be followed by examining boards in the various specialties in order to obtain membership in this Advisory Board and official recognition by the Council on Medical Education and Hospitals of the American Medical Association. This information is based in large part on the experience of previously formed boards during the past twenty-five years.

ORGANIZATION

This Advisory Board was organized in 1933-1934 to coordinate graduate education and certification of medical specialties in the United States and Canada.

Several specialty boards had been functioning actively and successfully for a number of years prior to the organization of the Advisory Board for Medical Specialties. Their purposes were, primarily, to establish minimum standards of graduate educational and training requirements for physicians representing themselves to the public as being specialists, with certification by the boards of candidates after they had been able successfully to pass the boards' examinations. Secondarily, these boards hoped to improve the general standards of graduate medical education and facilities for special training. This aim is being steadily and rapidly accomplished.

Credit for the improvement in undergraduate medical education, so noticeable in this country during the past twenty-five years, is due to the efforts of universities, educational foundations, medical schools, medical societies, and to public support along these lines. The same is true of the present transition in graduate education in the specialties, sharply stimulated by the establishment and activities of these certifying boards.

The American Board of Ophthalmology was the first special certifying board to be created in 1916; the American Board of Otolaryngology, established in 1924, was followed by the American Board of Obstetrics and Gynecology in 1930, and the American Board of Dermatology and Syphilology in 1932.

During part of this period of time plans for the organization of similar boards in other specialties were being actively projected, all of these groups being desirous of availing themselves of the experiences of the already existing boards.

It was soon recognized that some formal and official plan of organization must be established. It was clearly essential that an examining board must have the official sanction of the national societies in its given specialty as well as that of its section of the American Medical Association, but there was, at that time, nothing to prevent unofficial groups from organizing examining boards and using the title American Board.

Consequently, in order to avoid duplication of effort as well as to coordinate the work of the several boards and other interested groups into a concise and homogeneous plan for betterment, it was deemed advisable to create an Advisory Board which should give consideration to those problems common to all, and which should be representative of each organization concerned.

During the years 1933 and 1934 this Advisory Board was organized and began actively to function. Simultaneously at the Milwaukee session of the American Medical Association in 1933 a resolution was adopted authorizing the Council on Medical Education and Hospitals: (1) to formulate standards of administration based in general upon those of the American Boards of Ophthalmology, of Otolaryngology, of Obstetrics and Gynecology, and of Dermatology and Syphilology and, (2) to recognize officially new boards meeting these standards, this recognition to be based upon previous approval and recommendation to the Council by the Advisory Board.

A constitution and by-laws for the Advisory Board was adopted at a meeting in Chicago on February 11, 1934. The original member organizations of the Advisory Board for Medical Specialties were: the Association of American Medical Colleges; the American Hospital Association; the Federation of State Medical Boards of the U. S. A.; the National Board of Medical Examiners; the American Board of Ophthalmology, founded 1916; the American Board of Otolaryngology, founded 1924; the American Board of Obstetrics and Gynecology, founded 1930; and the American Board of Dermatology and Syphilology, founded 1932. Two representatives were appointed from each of these organizations to serve on the Advisory Board. Since that time the American Boards of Pediatrics (1934), of Psychiatry and Neurology (1934), of Radiology (1934), of Orthopaedic Surgery (1935), of Urology (1935), of Pathology (1936),

of Internal Medicine (1936), of Surgery (1937), of Anesthesiology (1938), of Plastic Surgery (1938), and of Neurological Surgery (1940) have been properly organized, approved, and elected to membership in the Advisory Board and recommended to the Council on Medical Education and Hospitals of the American Medical Association for official recognition. There are, therefore, fifteen examining boards now organized, approved and actively functioning in the fifteen specialties recognized as suitable fields for the certification of specialists.

The work of this board has been aided by grants from the Josiah Macy, Jr., Foundation of New York, but the board is now supported by its component groups.

PURPOSE

Article II of the Constitution states that, "This board shall act in an advisory capacity to such organizations as may seek its advice concerning the coordination of the education and certification of medical specialists." Specifically, this represents an official effort to advance the standards and improve the methods of graduate education and training in the medical specialties, with certification of men thus educated and trained who quality as specialists in the various branches. The common interest of the member organizations in these purposes is obvious. It is equally apparent that some fixed definition of specialties needed to be established, preferably on a graduate educational basis, that minimum standards of organization and conduct for new examining boards should be fixed, and that some official method of recognition be developed.

There is no desire on the part of these boards to interfere with any practitioners of medicine in any of their regular or legitimate activities. Their fundamental purpose is to ensure to the public, both lay and medical, and for its protection, that physicians claiming to be specialists with presumably special proficiency in one or another branch of medicine actually possess the qualifications they claim. This presupposes special training and demonstrable capability along certain lines of work. Suitable evidence of this is the ability of an individual to satisfy an examining board about his training and then to pass the examination for certification.

Surveys of existing facilities for graduate training in the various specialties are being conducted at the present time; residencies as well as preceptorship and assistantship training are being studied; preparations for stimulating medical school and hospital facilities for the required graduate training are going forward actively; round table conferences furnish discussions of subjects of interest in regard to graduate medical education.

The Council on Medical Education and Hospitals of the American Medical Association has agreed, under the authority vested in it by the resolution passed at the Milwaukee meeting (1933) and referred to above, that applications of special examining boards for official approval are to be referred to the Council through the Advisory Board for Medical Specialties, recommendation by the Advisory Board for such approval to be based upon the standards mutually adopted. The understanding exists that the Council cannot be bound by recommendations of the Advisory Board but will consult the Advisory Board for Medical Specialties before acting upon any application so long as mutually adopted standards are in force.

Early in 1940 there was published the first edition of the Directory of Medical Specialists containing the names and biographic data of all men certified by the several specialty boards, as well as information regarding the organization and functions of these boards. In the next edition to be published early in 1942 will appear the names and brief biographic records, including hospital and teaching appointments, of about 18,000 diplomates or certified specialists.

In response to the generally recognized need for a clear formulation of the educational problems and principles involved in graduate and postgraduate medical training, the Advisory Board at its meeting in June 1937 voted to create a Commission on Graduate Medical Education to study the various aspects of the whole problem. This commission included representatives of the profession, the specialties, the universities, the hospitals, and the licensing bodies. The report of this commission comprising 304 pages appeared in 1940, published by the University of Chicago Press, and is of real assistance to the various specialty boards, hospitals, medical schools, and regulatory bodies dealing with this phase of American medicine.

MEMBERSHIP

The Advisory Board is composed of two representatives from each of the approved examining boards in the medical specialties and such other national organizations as are interested in education, examination, and certification of medical specialists and duly elected to this body.

The Constitution provides that, "To be eligible for representation in this board an examining board in a specialty must be composed of members elected from or appointed by societies recognized by this board as a national society in that specialty together with representation from the related section of the American Medical Association." Upon being accepted by the Advisory Board the board in question is recommended to the Council on Medical Education and Hospitals of the American Medical Association as qualified for recognition. Membership in the Advisory Board provides for the inclusion of the name of the organization in all lists and directories published by the Advisory Board for Medical Specialties and provides also for publication of the names of specialists certified by each individual examining board.

This board reports directly to its member groups, and functions in close cooperation with the Council on Medical Education and Hospitals of the American Medical Association, and with the Advisory Council on Medical Education.

The Advisory Board has voted that no more subsidiary boards be formed and that further special groups be provided for, so far as possible, with the boards of medicine and surgery.

Meetings of the Advisory Board for Medical Specialties are held annually as required.

Traveling and other expenses of representatives in attendance are borne by member organizations.

ESSENTIALS FOR APPROVED SPECIAL EXAMINING BOARDS

I. ORGANIZATION

1. A special examining board to be approved by the Advisory Board for Medical Specialties should represent a recognized and distinct specialty of medicine. (It is agreed between the Council and the Advisory Board that no board shall be organized in a special field having less than one hundred members engaged in special practice in the United States.)

2. It should be composed of representatives of the national organizations in that specialty including the related section of the American Medical Association.

3. It should be incorporated.

4. A special board should:

(a) Determine whether candidates have received adequate preparation.

(b) Provide a comprehensive test of the ability and fitness of such candidates.

(c) Certify to the competence of those physicians who have satisfied its requirements.

II. DEFINITION OF SPECIAL FIELDS

The following branches of medicine at present are recognized as suitable fields for the certification of specialists:

1. Internal Medicine
2. Surgery
3. Pediatrics
4. Obstetrics and Gynecology
5. Ophthalmolgy
6. Otolaryngology
7. Dermatology and Syphilology
8. Psychiatry and Neurology
9. Urology
10. Orthopaedic Surgery
11. Radiology
12. Pathology
13. Neurological Surgery
14. Anesthestology
15. Plastic Surgery

III. QUALIFICATION OF CANDIDATES

Each applicant for admission to the examination should be required to present evidence that he has met the following standards:

A. General Qualifications.

1. Satisfactory moral and ethical standing in the profession.

2. Membership in the American Medical Association or membership in such Canadian or other medical societies as are recognized for this purpose by the Council on Medical Education and Hospitals of the American Medical Association is recommended. Membership in other societies should not be required. (Exceptions to the foregoing may now be made at the discretion of any individual board for good and sufficient reasons.)

B. Professional Standing.

1. Graduation from a medical school recognized by the Council on Medical Education and Hospitals of the American Medical Association.

2. Completion of an internship, preferably of the general rotating type, of not less than one year in a hospital approved by the same Council.

C. Special Training.

(To be effective as far as practical not later than Jan. 1, 1944.)

1. A period of study, after the internship, of not less than three years in clinics, dispensaries, hospitals or laboratories recognized by the same Council as competent to provide a satisfactory training in the special field of study.

2. This period of specialized preparation should include:

(a) Graduate training in anatomy, physiology, pathology, and the other basic medical sciences which are necessary to the proper understanding of the specialty in question.

(b) An active experience of not less than eighteen months in hospital clinics, dispensaries and diagnostic laboratories recognized by the Council as competent in the specialty.

(c) Examinations in the basic medical sciences of a specialty as well as in the clinical, laboratory and public health aspects.

3. An additional period of not less than two years of study and/or practice.

These essentials were adopted by the Advisory Board for Medical Specialties June 10, 1934 and have had only minor changes since then. They are practically identical with an outline of Essentials for Approved Specialty Boards adopted June 10, 1934 by the Council on Medical Education and Hospitals of the American Medical Association and ratified June 11, 1934 by the House of Delegates of the American Medical Association.

ORGANIZATION OF EXAMINING BOARDS

The foregoing essentials for approved special examining boards were followed in the organization of the existing boards.

Official sponsorship of the national societies, and the related section of the American Medical Association, in a specialty organizing an examining board, has included the election or appointment of representatives from each of these national societies to serve on the board as examiners and directors.

Each board was or is incorporated. Each application for organization and approval included:

1. The name of the proposed board.
2. A statement of its method of organization, the sponsoring societies, its list of officers, and the names and addresses of the elected or appointed members of the board, including the societies which each represents.
3. A copy of the tentative constitution and by-laws.
4. A copy of its proposed articles of incorporation.
5. An outline of qualification requirements for applicants.
6. An outline of proposed methods of examination.
7. A copy of the application blank.
8. Any general information or statement of importance.
9. Approximate number of physicians practicing the specialty which the board represents.

These data are submitted in duplicate to the office of the Secretary of the Advisory Board for Medical Specialties.

An application for election to membership in the Advisory Board and the data listed above are referred immediately for review by the Committee on Standards and Examinations of the Advisory Board. Upon approval by the committee incorporation is then completed and a statement of this filed with the secretary. Action on the application will be taken at the succeeding meeting of the Advisory Board for Medical Specialties and each examining board as elected will be recommended to the Council on Medical Education and Hospitals of the American Medical Association for official recognition. One of the two sets of data submitted is forwarded to the Council on Medical Education and Hospitals of the American Medical Association with the Advisory Board's recommendations. Examination and certification of applicants in the specialty may begin immediately when the special board is given such approval.

Communications should be addressed to the secretary.

CONSTITUTION AND BY-LAWS

Adopted at Organization Meeting, February 11, 1934

ARTICLE I

NAME

The name of this organization shall be "The Advisory Board for Medical Specialties."

ARTICLE II

PURPOSE

This board shall act in an advisory capacity to such organizations as may seek its advice concerning the coordination of the education and certification of medical specialists. No action taken by this Board shall be binding upon any member organizations.

ARTICLE III

MEMBERSHIP

Section I

This board shall be composed of two representatives from each of the examining boards of the medical specialties and such other national organizations as are interested in education, examination, or certification of medical specialists.

Section II—Original Membership

At the time of the organization, this board shall be composed of representatives from each of the following bodies:

The American Board of Ophthalmology.
The American Board of Otolaryngology
The American Board of Obstetrics and Gynecology
The American Board of Dermatology and Syphilology
The Association of American Medical Colleges
The National Board of Medical Examiners
The Federation of State Medical Boards of the U. S. A.
The American Hospital Association
The Council on Medical Education and Hospitals of the American Medical Association

Section III—Additional Membership

To be eligible for representation in this board an examining board in a specialty must be composed of members elected from or appointed by societies recognized by this board as national societies in that specialty together with representation from the related Section of the American Medical Association. Upon being accepted by this Advisory Board the board in question will be recommended to the American Medical Association as being qualified for recognition by that Association.

Section IV—Quorum

A quorum at any meeting shall consist of a majority of the official representatives to the board and at least one-third of the membership organizations shall be represented. Each member organization shall be entitled to two votes.

ARTICLE IV

OFFICERS AND STANDING COMMITTEES

Section I—Officers

The officers of this board shall be (a) President, (b) Vice President, (c) Secretary-Treasurer. These officers shall be elected at the annual meeting each year.

Section II—Standing Committees

The standing committees shall be as follows:

1. The Executive Committee
2. Standards and Examinations
3. Finance

The Executive Committee shall consist of the President, Vice President, Secretary-Treasurer, and two members elected at the annual meetings. No organization should have more than one member on the Executive Committee. The President shall be the Chairman of the Executive Committee. The other standing committees shall be appointed by the President.

ARTICLE V

AMENDMENTS TO THE CONSTITUTION

Amendments to this constitution may be made by a majority vote of the official representatives present at any annual meeting provided that thirty days' notice of the proposed amendment has been given each member of the board.

BY-LAWS

ARTICLE I

DUTIES OF OFFICERS

Section I

The President shall preside at all meetings of the board, shall act as Chairman of the Executive Committee, and shall appoint all other standing committees. He shall call meetings of the Executive Committee at such time and place as may be deemed necessary.

Section II

The Vice President shall assume the duties of the President in his absence.

Section III

The Secretary-Treasurer shall perform the usual duties of this office.

ARTICLE II

EXECUTIVE COMMITTEE

The Executive Committee shall carry out the policies and activities decided upon by the board. It shall have ad interim authority to initiate policies subject to approval by the board at the annual or any special meeting. The two elected members shall serve for two years, the terms of office terminating in alternate years.

ARTICLE III

MEETINGS

Section I

There shall be an annual meeting at such time and place as the board may determine. A special meeting may be called by the president upon ten days' notice to all members stating time, place and purpose of such meetings. The Executive Committee may present other business for consideration.

Section II

The Executive Committee shall meet subject to the call of the President.

Section III

Robert's Rules of Order shall be followed except where they conflict with this Constitution and By-Laws.

ARTICLE IV

AMENDMENTS TO THE BY-LAWS

Amendments to these by-laws may be made at any regular or special meeting of the board.

HOSPITALS APPROVED FOR TRAINING INTERNS

By the Council on Medical Education and Hospitals of the American Medical Association

The following general hospitals are considered in position to furnish acceptable internships of at least one year duration. They are also accredited for mixed residencies, which represent general assignments following an approved intern service.

The ✦ sign indicates additional approval for residencies in specialties.

HOSPITALS, 735. INTERNSHIPS, 6,874

Capacity, 249,045 Beds

The terms used in the column "Type of Internship" are defined as follows:

1. A full rotating internship provides training in medicine, surgery, pediatrics, obstetrics, pathology and radiology. (X-ray and laboratory duties may be combined with clinical services or constitute separate assignments.)

2. A mixed or limited rotating internship covers more than one of the clinical specialties but does not include all of the divisions listed above.

3. A straight internship is an assignment limited to a single department but may include the subspecialties of the same branch. Straight internships are now approved in the divisions of medicine, surgery, pediatrics, pathology, obstetrics and obstetrics-gynecology.

ABBREVIATIONS

Army	United States Army	Indiv	Individual	Part	Partnership
CyCo	City and County	M	Mixed	Req	Required
Corp	Corporation unrestricted as to profit	NPAssn	Nonprofit association	R	Rotating
Fed	Federal	Op	Optional	S	Straight
				USPHS	United States Public Health Service

Name of Hospital	Location	Control	Capacity	Total Patients Treated	% Service Cases	% Priv. Pts. Worked Up by Interns	Type of Internship	Interns Appointed Annually	Length of Service in Months	Service Commences	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Appointments Made
ALABAMA															
Hillman Hospital [3]✦	Birmingham	County	478	11,293	100	..	R	10	24	July	No	Req 25	(c)		Nov
Norwood Hospital [1]✦	Birmingham	Church	226	5,007	95	80	R	4	12	July	No	Req 35	$50		Nov
Employees' Hospital of the Tennessee Coal, Iron and Railroad Company ✦	Fairfield	NPAssn	306	7,327	100	..	R	12	12	July	No	Req 44	$25		Nov
City Hospital	Mobile	CyCo	145	3,747	90	25	R	4	12	July	No	Req 67	$25		Nov
ARIZONA															
Good Samaritan Hospital	Phoenix	Church	196	5,398	..	..	R	3	12	July	No	None 21	$25		Nov
St. Joseph's Hospital [1]	Phoenix	Church	225	9,074	..	..	R	6	12	July	No	None 26	$30		Nov
ARKANSAS															
Baptist State Hospital ✦	Little Rock	Church	315	5,717	8	100	R	5	12	July	No	None 31	$25		Nov
St. Vincent Infirmary	Little Rock	Church	233	4,710	11	15	R	5	12	June	No	None 24	$25		Nov
University Hospital [1]	Little Rock	State	224	3,976	100	..	R	10	12	July	No	Req 51	$25		Nov
CALIFORNIA															
General Hospital of Fresno County ✦	Fresno	County	500	7,958	100	..	R	12	12	July	No	Req 37	$25		Nov
Glendale Sanitarium and Hospital [1]	Glendale	Church	212	3,925	37	100	R	5	12	July	No	Op 28	$32.50(a)		Nov
Loma Linda Sanitarium and Hospital [1]	Loma Linda	Church	124	3,028	80	50	R	4	12	July	No	Req 30	$50(a)		Nov
California Hospital [1]	Los Angeles	Church	293	8,845	..	95	R	13	12	JanJuly	(5)	Req 29	$25		Nov
Cedars of Lebanon Hospital [1]✦	Los Angeles	NPAssn	298	8,313	19	75	R	10	12	July	(6)	Req 41	$20		Nov
Hospital of the Good Samaritan [1]	Los Angeles	Church	445	10,036	..	..	R	8	12	July	Yes	Req 30	$25		Nov
Los Angeles County Hospital [1-3]✦	Los Angeles	County	4,011	48,902	100	..	R	63	24	July	No	Req 57	$10		Nov
Presbyterian Hospital—Olmsted Memorial [1]	Los Angeles	NPAssn	315	7,341	..	..	R	5	12	July	No	Op 32	$25		Nov
Queen of Angels Hospital	Los Angeles	Church	380	9,253	..	100	R	10	12	July	No	Req 35	$30		Nov
St. Vincent's Hospital ✦	Los Angeles	Church	300	6,292	..	..	R	6	12	July	(6)	None 40	$40		Dec
Santa Fe Coast Lines Hospital	Los Angeles	NPAssn	190	3,382	..	..	R	6	12	July	(7)	Req 63	$25		Dec
White Memorial Hospital [1]✦	Los Angeles	Church	215	7,317	56	100	R	16	12	July	No	Req 41	$45(a)		Nov
United States Naval Hospital	Mare Island	Navy	489	5,016	100	..	R	..	12	June	No	Req 66	(b)		Varies
Highland-Alameda County Hospital [1-3]✦	Oakland	County	388	12,797	100	..	R	24	12	July	(8)	Op 58	$20		Nov
Orange County General Hospital	Orange	County	332	3,329	100	..	R	10	12	July	No	Req 46	$15-20		Nov
Collis P. and Howard Huntington Memorial Hospital ✦	Pasadena	NPAssn	229	5,958	..	..	R	6	12	JanJuly	(9)	Req 56	$25		Nov
Sacramento County Hospital	Sacramento	County	510	8,219	100	..	R	12	12	July	No	Req 42	$35		Nov
San Bernardino County Charity Hospital ✦	San Bernardino	County	341	3,780	100	..	R	9	12	July	No	Req 40	$25		Nov
San Diego County General Hospital ✦	San Diego	County	676	9,313	100	..	R	14	12	July	No	Req 26	$20		Nov
United States Naval Hospital	San Diego	Navy	1,184	9,711	100	..	R	8	12	July	(10)	Req 78	(b)		Varies
Franklin Hospital [1]	San Francisco	NPAssn	248	5,508	69	78	R	10	12	July	No	Req 40	$25		Nov
French Hospital [1]✦	San Francisco	NPAssn	259	3,788	..	100	R	7	12	July	No	Req 48	$25(d)		Nov
Hospital for Children [3]✦	San Francisco	NPAssn	232	4,775	21	90	R	10	12	July	No	Req 74	$50 yr		Jan
Letterman General Hospital [3]	San Francisco	Army	1,202	9,004	100	..	R	..	12	July	No	Req 86	(c)		Varies
Mary's Help Hospital ✦	San Francisco	Church	144	3,167	18	100	R	5	12	July	No	Req 37	$25		Dec
Mount Zion Hospital [1-3]✦	San Francisco	NPAssn	187	3,980	26	98	R	12	12	June	No	Req 69	$15		Nov
St. Luke's Hospital [1]✦	San Francisco	Church	220	5,334	13	100	R	5	12	July	No	Req 55	$15		Nov
St. Mary's Hospital	San Francisco	Church	365	8,516	11	100	R	8	12	July	No	Req 29	$25		Sept
San Francisco Hospital [1-3]✦	San Francisco	CyCo	1,334	16,555	100	..	R	52	12	July	(11)	Req 56	$10		Nov
Southern Pacific General Hospital	San Francisco	NPAssn	400	5,661	100	..	R	16	12	July	(12)	Req 48	$30		Oct
Stanford University Hospitals [1]✦	San Francisco	NPAssn	355	9,726	50	50	S	15	12	July	No	Req 53	No		Dec
United States Marine Hospital	San Francisco	USPHS	485	5,211	100	..	R	12	12	July	(13)	Op 70	$62.50		Varies
University of California Hospital [1]✦	San Francisco	State	309	7,608	59	33	S	22	12	July	No	Req 67	$50 yr		Dec
Santa Clara County Hospital [3]✦	San Jose	County	563	7,754	100	..	R	10	12	July	No	Req 21	$20(d)		Nov
St. Francis Hospital	Santa Barbara	Church	165	1,979	9	99	R	3	12	July	No	Op 46	$20		Feb
Santa Barbara Cottage Hospital [1]	Santa Barbara	NPAssn	185	3,501	2	99	R	5	12	July	No	Op 77	$20		Nov
Santa Barbara General Hospital [1]	Santa Barbara	County	312	2,491	100	..	R	7	12	June	No	Req 74	$15		Nov
COLORADO															
Boulder-Colorado Sanit. and Hospital [1]	Boulder	Church	107	1,185	75	100	R	2	12	Jan	(14)	Op 48	$35		Nov
Beth-El General Hospital and Sanatorium [1]	Colorado Springs	Church	176	2,051	..	60	R	3	12	July	No	None 40	$25		Jan
St. Francis Hospital and Sanatorium	Colorado Springs	Church	150	1,431	..	20	R	2	12	July	No	None 41	$25		Varies
Colorado General Hospital [1-3]✦	Denver	State	265	5,878	100	..	R	16	12	July	No	Req 84	$30		Nov
Denver General Hospital ✦	Denver	CyCo	572	7,416	100	..	R	10	18	JanJuly	No	Req 41	$30		Varies
Mercy Hospital	Denver	Church	240	6,653	10	90	R	5	12	July	No	Req 34	$25		Oct
Presbyterian Hospital	Denver	Church	175	4,597	..	..	R	5	12	July	No	Req 20	$25		Varies
St. Anthony Hospital	Denver	Church	210	3,715	..	..	R	3	12	July	No	None 29	$25		Feb
St. Joseph Hospital	Denver	Church	300	6,343	75	..	R	6	12	July	No	Req 31	$25		Nov
St. Luke's Hospital ✦	Denver	Church	250	6,910	..	90	R	8	12	July	No	None 46	$25		Varies
CONNECTICUT															
Bridgeport Hospital	Bridgeport	NPAssn	400	9,463	41	..	R	10	12	July	No	None 37	$10		Nov
St. Vincent's Hospital	Bridgeport	Church	325	6,563	38	100	R	9	12	July	No	Req 19	$20		Nov
Danbury Hospital	Danbury	NPAssn	210	2,901	32	100	R	4	12	July	No	None 63	$40		Nov
Hartford Hospital [3]✦	Hartford	NPAssn	773	17,514	49	100	R	15	24	July	No	None 57	No		Nov
Municipal Hospitals [3]✦	Hartford	City	340	4,467	100	..	R	6	24	July	No	Req 40	$10		Nov

Numerical and other references will be found on page 766.

Name of Hospital	Location	Control	Capacity	Total Patients Treated	% Service Cases	% Priv. Pts. Worked Up by Interns	Type of Internship	Interns Appointed Annually	Length of Service in Months	Service Commences	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Appointments Made
CONNECTICUT—Continued															
St. Francis Hospital [3*]	Hartford	Church	526	10,632	44	100	R	12	12	July	No	Req	22	$10	Nov
Meriden Hospital	Meriden	NPAssn	140	3,256	38	62	R	4	12	July	No	None	45	$15(e)	Mar
Middlesex Hospital	Middletown	NPAssn	167	3,164	51	..	R	3	12	July	No	None	28	$20(f)	Jan
New Britain General Hospital	New Britain	NPAssn	263	5,572	44	80	R	6	12	July	No	Req	29	$30	Nov
Grace Hospital [4]	New Haven	NPAssn	270	6,034	37	90	R	6	24	July	No	Req	28	$10	Sept
Hospital of St. Raphael	New Haven	Church	280	6,805	27	90	R	4	24	July	No	None	28	$20	Nov
New Haven Hospital [1,3*]	New Haven	NPAssn	571	10,265	64	91	M&S	25	12&24	JanJulySept	No	Req	59	No	Nov
Lawrence and Memorial Associated Hospitals	New London	NPAssn	248	3,502	64	..	R	4	12	July	No	None	34	$22.50	Dec
Norwalk General Hospital	Norwalk	NPAssn	196	5,001	15	65	R	5	12	JanJuly	No	None	41	$50	Nov
William W. Backus Hospital [1]	Norwich	NPAssn	178	3,018	45	100	R	3	12	July	No	Req	39	$25	Varies
Stamford Hospital	Stamford	NPAssn	260	5,179	34	100	R	6	18	JanJuly	No	Req	33	$45	Dec
St. Mary's Hospital [3]	Waterbury	Church	270	8,798	32	50	R	6	12	July	No	Req	34	$25	Nov
Waterbury Hospital	Waterbury	NPAssn	355	6,798	33	100	R	8	12	JulyOct	No	Req	44	$25	Nov
DELAWARE															
Delaware Hospital	Wilmington	NPAssn	238	4,548	39	50	R	8	12	July	No	Req	29	$25	Nov
Memorial Hospital [4]	Wilmington	NPAssn	244	4,540	57	95	R	6	12	July	No	Req	30	$35	Nov
St. Francis Hospital [1]	Wilmington	Church	135	1,816	38	63	R	3	12	July	No	Req	47	$25	Jan
Wilmington General Hospital	Wilmington	NPAssn	218	3,900	22	100	R	7	12	July	No	Req	41	$15(h)	Mar
DISTRICT OF COLUMBIA															
Central Disp. and Emergency Hospital [4]	Washington	NPAssn	280	6,772	27	100	M	13	12	June	No	Req	64	$10	Nov
Freedmen's Hospital [1,3*]	Washington	USPHS	450	5,438	97	65	R	16	12	JulyOct	No	Req	32	$10	Nov
Gallinger Municipal Hospital [4]	Washington	City	1,446	15,881	100	..	R	30	12	July	No	Op	40	$10	Dec
Garfield Memorial Hospital [1,3*]	Washington	NPAssn	433	10,834	..	..	R	12	12	July	No	Req	59	$10(f)	Nov
Georgetown University Hospital [3*]	Washington	NPAssn	268	5,919	27	73	R	10	12&24	July	(15)	Req	44	$10	Dec
George Washington University Hospital [4]	Washington	NPAssn	114	2,699	17	80	R	5	12	July	No	Req	44	$15	Nov
Providence Hospital [3*]	Washington	Church	300	7,926	38	100	R	6	24	July	(15)	Req	30	$10	Nov
St. Elizabeths Hospital, Medical and Surgical Department [1,3]	Washington	USPHS	456	2,201	100	..	R	6	24	MarJulyNov	(16)	Req	66	(b)	Feb
Sibley Memorial Hospital [4]	Washington	Church	345	8,683	..	..	R	8	12	July	No	Req	41	$30	Nov
United States Naval Hospital	Washington	Navy	205	2,177	100	..	R	..	12	July	No	None	76	(b)	Varies
Walter Reed General Hospital [3*]	Washington	Army	1,421	8,467	100	..	R	15	12	July	No	Op	82	$65	July
Washington Sanitarium and Hospital, Takoma Park	Washington	Church	210	3,455	73	67	R	4	12	July	No	Req	37	$65(a)	Nov
FLORIDA															
Duval County Hospital [4]	Jacksonville	County	240	4,280	100	..	R	6	12	July	No	Req	41	$15	Nov
St. Luke's Hospital	Jacksonville	NPAssn	200	4,773	12	75	R	5	12	July	No	None	35	$25	Nov
St. Vincent's Hospital	Jacksonville	Church	240	6,050	17	10	R	6	12	July	No	None	28	$30	Nov
James M. Jackson Memorial Hospital [3*]	Miami	City	500	14,631	60	..	R	15	12	July	No	Req	61	$20	Nov
United States Naval Hospital	Pensacola	Navy	142	1,252	100	..	R	4	12	Varies	No	Req	54	(b)	Varies
GEORGIA															
Crawford W. Long Memorial Hospital [1]	Atlanta	NPAssn	188	6,443	2	100	R	6	12	July	No	None	23	$40	Jan
Georgia Baptist Hospital	Atlanta	Church	184	6,463	25	15	R	7	12	July	(17)	None	24	$35(e)	Nov
Grady Hospital [3*]	Atlanta	City	732	21,077	100	..	R	34	12	July	No	Req	38	$10	Nov
Piedmont Hospital [4]	Atlanta	NPAssn	147	4,003	..	100	R	6	12	July	(17)	None	43	$35(e)	Nov
St. Joseph's Infirmary [4]	Atlanta	Church	169	4,528	34	60	R	4	12	July	No	Req	26	$35	Nov
University Hospital [4]	Augusta	City	395	8,495	47	100	R	14	12	July	No	Req	35	$10	Nov
Columbus City Hospital [1]	Columbus	City	237	4,408	61	39	R	5	12	July	No	Req	21	$50	Jan
Emory University Hospital [4]	Emory University	NPAssn	269	6,495	18	100	R	10	12	July	No	Req	52	$30	Nov
Macon Hospital	Macon	CyCo	228	5,469	81	31	R	7	12	July	No	Req	24	$25	Dec
ILLINOIS															
St. Joseph's Hospital [1]	Alton	Church	135	3,800	8	65	M	1	12	July	No	None	17	$50	Dec
Alexian Bros. Hospital (male patients only)	Chicago	Church	252	4,318	10	100	R	7	12	July	(18)	None	34	$50	Varies
American Hospital [1]	Chicago	NPAssn	195	3,355	60	100	R	5	12	July	No	None	41	No	Jan
Augustana Hospital [4]	Chicago	Church	300	5,327	15	25	M	8	18	JanJuly	No	None	35	No	Nov
Belmont Community Hospital	Chicago	NPAssn	125	2,411	2	..	R	4	12	July	No	None	28	$30	Jan
Chicago Memorial Hospital	Chicago	NPAssn	108	2,695	..	100	R	5	12	July	No	Req	57	$25	Jan
Columbus Hospital	Chicago	Church	172	3,749	16	100	R	4	12	July	No	None	77	$25	Jan
Cook County Hospital [1*]	Chicago	County	3,525	81,154	100	..	R	68	18	JanJuly	No	Req	20	No	Nov
Edgewater Hospital	Chicago	NPAssn	145	4,171	..	..	R	5	12	JanJuly	No	None	45	$25	DecJune
Englewood Hospital	Chicago	NPAssn	126	3,607	..	40	R	6	12	JanJuly	No	None	35	$25	DecJune
Evangelical Hospital [1]	Chicago	Church	240	7,357	..	..	R	6	12	July	No	None	22	$25	Jan
Garfield Park Community Hospital	Chicago	NPAssn	182	4,407	..	100	R	6	12	July	No	None	21	$25	Varies
Grant Hospital [4]	Chicago	NPAssn	264	6,572	8	100	R	12	12	July	No	Req	51	Nov	Nov
Henrotin Hospital [1]	Chicago	NPAssn	120	2,859	50	98	R	4	12	JanJuly	No	None	57	$25	JanJuly
Holy Cross Hospital	Chicago	Church	157	4,033	..	..	R	5	12	July	No	None	48	$25	Varies
Hospital of St. Anthony de Padua	Chicago	Church	232	5,393	..	100	R	9	18	JanJuly	No	None	18	$25	Varies
Illinois Central Hospital	Chicago	NPAssn	200	4,200	..	60	M	2	12	Quarterly	No	Req	50	$25	Quarterly
Illinois Masonic Hospital [1]	Chicago	NPAssn	184	4,410	25	75	R	6	12	JanJuly	No	Req	57	No	Varies
Jackson Park Hospital	Chicago	Corp	222	3,723	..	100	R	6	12	July	No	None	44	$10	Jan
Loretto Hospital [1]	Chicago	Church	152	3,490	..	86	R	6	12	July	No	None	35	$25	Varies
Lutheran Deaconess Home and Hospital	Chicago	Church	218	4,112	18	14	R	6	12	July	No	None	38	$15	Nov
Mercy Hospital-Loyola University Clinics [4]	Chicago	Church	311	6,584	22	78	R	10	12	July	No	Req	43	No	Nov
Michael Reese Hospital [4]	Chicago	NPAssn	666	17,609	30	..	R	28	12-24	JanJuly	(19)	Req	60	No	Nov
Mother Cabrini Memorial Hospital	Chicago	Church	140	3,558	29	29	R	4	12	July	No	None	34	$25	Jan
Mount Sinai Hospital [4]	Chicago	NPAssn	220	6,157	27	100	R	10	12	June	No	Op	51	No	Nov
Norwegian-American Hospital [4]	Chicago	NPAssn	242	4,506	1	99	R	6	12	July	No	None	42	$25	Nov
Passavant Memorial Hospital [4]	Chicago	NPAssn	225	5,257	..	..	R	9	12	JanJulyOct	No	Req	70	No	6monady
Presbyterian Hospital [4]	Chicago	Church	412	11,617	..	100	M&S	19	12-20	(g)	No	Op	64	No	(g)
Provident Hospital [4]	Chicago	NPAssn	166	3,569	69	100	R	8	12	July	No	Req	47	$10	Nov
Ravenswood Hospital	Chicago	NPAssn	205	5,353	..	..	R	6	12	July	No	None	28	$25	Jan
Research and Educational Hospital [4]	Chicago	State	467	5,475	100	..	R	14	12-18	JanJuly	No	Op	87	No	Oct
St. Anne's Hospital	Chicago	Church	300	7,015	5	95	R	7	12	June	No	None	19	$20	Varies
St. Bernard's Hospital	Chicago	Church	233	6,774	..	..	R	6	12	July	No	None	26	$25	July
St. Elizabeth Hospital	Chicago	Church	262	7,101	..	..	R	6	12	July	No	None	24	$15	Nov
St. Joseph Hospital [4]	Chicago	Church	250	4,342	20	100	R	8	12	July	No	Req	40	No	Nov
St. Luke's Hospital [3*]	Chicago	NPAssn	522	12,138	15	100	R	18	24	July	No	Req	71	No	Nov
St. Mary of Nazareth Hospital	Chicago	Church	284	7,391	4	..	R	8	12	JanJuly	No	None	28	$30	Varies
South End Hospital	Chicago	Corp	129	3,296	..	..	R	4	12	JanJuly	No	None	33	$30	Jan
South Shore Hospital	Chicago	Corp	150	2,428	..	..	R	4	12	JanJuly	No	None	30	$40(f)	Oct
Swedish Covenant Hospital [1]	Chicago	Church	217	5,045	..	..	R	8	12	July	No	None	37	$25	Dec
United States Marine Hospital [3]	Chicago	USPHS	301	2,750	100	..	R	6	12	July	(20)	Op	52	$62.50	Varies
University Hospital	Chicago	NPAssn	121	5,578	34	100	R	4	12	July	No	None	35	$15	July
University of Chicago Clinics [1,3*]	Chicago	NPAssn	685	10,841	..	100	S	48	12	JanJuly	No	Req	78	No	NovJuly
Walther Memorial Hospital [1]	Chicago	Church	211	4,433	5	..	R	6	12	July	No	None	29	$25	Varies

Numerical and other references will be found on page 766.

Name of Hospital	Location	Control	Capacity	Total Patients Treated	% Service Cases	% Priv. Pts. Worked Up by Interns	Type of Internship	Interns Appointed Annually	Length of Service in Months	Service Commences	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Appointments Made
ILLINOIS—Continued															
Washington Boulevard Hospital	Chicago	NPAssn	108	1,994	..	100	R	2	18	Quarterly	No	None 50	No		July
Wesley Memorial Hospital [1]✦	Chicago	Church	173	3,261	32	62	R	6	12	JanJuly	No	None 72	No		Varies
Women and Children's Hospital [2]	Chicago	NPAssn	125	2,764	46	54	R	4	12	JanJuly	No	Req 50	No		Nov
Woodlawn Hospital [1]	Chicago	NPAssn	147	3,156	..	..	R	4	12	JanJuly	No	None 52	$25		NovFeb
St. Mary's Hospital [1]	East St. Louis	Church	276	4,781	..	100	R	6	12	July	No	None 39	$25		Nov
Evanston Hospital ✦	Evanston	NPAssn	260	8,291	13	100	R	12	18	(g)	No	Req 79	No		SprFall
St. Francis Hospital ✦	Evanston	Church	312	6,263	..	100	R	9	12	July	No	None 47	$30(i)		Nov
Little Company of Mary Hospital [1]✦	Evergreen Park	Church	235	6,199	..	..	R	7	12	July	No	None 26	$25		Jan
United States Naval Hospital	Great Lakes	Navy	280	3,892	100	..	R	6	12	Varies	No	Req ..	(b)		Varies
Moline Public Hospital [1]	Moline	City	200	4,737	..	100	R	3	12	JanJuly	No	None 26	$25(f)		JanJuly
Oak Park Hospital [1]	Oak Park	Church	170	4,811	..	..	R	6	12	July	No	None 28	$35		Nov
West Suburban Hospital	Oak Park	NPAssn	412	8,399	..	..	R	12	12-15	AprJulyOct	No	Req 54	No		Varies
Methodist Hospital of Central Illinois ✦	Peoria	Church	240	5,510	..	..	R	8	12	July	No	None 42	$25		Nov
St. Francis Hospital [1]✦	Peoria	Church	411	10,820	..	..	R	10	12	July	No	None 29	$25		Nov
St. Mary's Hospital	Quincy	Church	215	4,177	60	30	R	3	12	July	No	None 26	$25		Nov
St. Anthony's Hospital	Rockford	Church	259	5,090	..	100	R	4	12	JanJuly	No	None 30	$75		Nov
INDIANA															
St. Catherine's Hospital	East Chicago	Church	312	6,094	..	..	R	7	12	July	No	None 29	$25		Nov
Lutheran Hospital	Fort Wayne	Church	190	3,725	..	..	R	3	12	July	No	None 20	$25(j)		Jan
St. Joseph Hospital	Fort Wayne	Church	300	4,995	..	..	R	5	12	July	No	None 19	$50		Nov
Methodist Hospital [1]	Gary	Church	125	3,967	..	100	R	3	12	July	No	None 22	$30		Mar
St. Mary's Mercy Hospital	Gary	Church	260	6,446	..	98	R	8	12	June	No	None 32	$25		Nov
St. Margaret Hospital	Hammond	Church	265	5,883	..	..	R	10	12	July	No	None 23	$30		Oct
Indianapolis City Hospital [1-3]✦	Indianapolis	City	724	11,530	98	100	R	28	24	July	No	Req 56	$14.25		Nov
Indiana University Medical Center [1-3]✦	Indianapolis	State	604	9,359	85	100	R	27	12	July	No	Req 52	$12.50		Nov
Methodist Hospital ✦	Indianapolis	Church	578	17,033	5	100	R	23	12	July	No	None 24	$10		Dec
St. Vincent's Hospital	Indianapolis	Church	333	7,192	..	..	R	6	12	July	No	None 16	$25		Dec
Ball Memorial Hospital ✦	Muncie	NPAssn	242	4,878	..	..	R	6	12	July	No	None 60	$30		Nov
Epworth Hospital [1]✦	South Bend	NPAssn	192	4,826	5	82	R	4	12	July	No	Req 35	$50		Nov
St. Joseph's Hospital [1]	South Bend	Church	147	3,479	15	100	R	3	12	July	No	Req 37	$25(j)		Dec
St. Anthony's Hospital [1]	Terre Haute	Church	199	3,581	..	..	R	3	12	July	No	None 19	$30		Dec
IOWA															
Mercy Hospital	Cedar Rapids	Church	175	2,916	..	..	R	3	12	July	No	None 18	$25		Jan
Jennie Edmundson Memorial Hospital [1]	Council Bluffs	NPAssn	135	2,389	30	100	R	4	12	July	No	None 16	$50		Nov
Mercy Hospital	Davenport	Church	165	5,879	..	100	R	3	12	July	No	None 14	$25		Mar
Broadlawns, Polk County Public Hospital [1]	Des Moines	County	118	4,712	100	..	R	10	12	July	(21)	Req 56	$25(f)		Jan
Iowa Lutheran Hospital [1]	Des Moines	Church	145	3,534	4	100	R	4	12	July	(21)	Req 18	$25(m)		Fall
Iowa Methodist Hospital [1]	Des Moines	Church	279	7,451	..	..	R	8	12	July	No	Op 79	$30(o)		Nov
Mercy Hospital [1]	Des Moines	Church	190	4,123	..	..	R	5	12	July	(21)	Req 19	$25		Jan
University Hospitals [1-3]✦	Iowa City	State	594	18,451	55	5	R	20	12	July	No	Req 53	$100yr		Nov
St. Joseph Mercy Hospital	Sioux City	Church	220	5,563	..	..	R	5	12	July	No	Req 33	$25		Dec
KANSAS															
Providence Hospital	Kansas City	Church	120	2,664	..	100	R	2	12	July	No	None 61	$35		Jan
St. Margaret's Hospital	Kansas City	Church	251	4,126	..	100	R	6	12	July	No	None 74	$25		Nov
University of Kansas Hospitals [1]✦	Kansas City	State	350	6,015	66	..	R	12	12	June	(22)	Req 68	$15		Fall
St. Francis Hospital [1]✦	Wichita	Church	300	6,425	..	..	R	7	12	July	(23)	Req 47	$40		Nov
Wesley Hospital [1]	Wichita	Church	261	4,755	..	..	R	7	12	July	(24)	None 24	$40(n)		Nov
Wichita Hospital [1]	Wichita	Church	120	2,706	2	..	R	4	12	July	(23)	None 32	$40		Dec
KENTUCKY															
St. Elizabeth Hospital	Covington	Church	316	4,842	38	..	R	6	12	July	No	Req 32	$25		Nov
Good Samaritan Hospital	Lexington	Church	283	7,418	50	50	R	6	12	July	No	None 41	$25		Dec
St. Joseph Hospital ✦	Lexington	Church	239	5,483	36	95	R	5	12	July	No	Req 43	$25		Nov
Kentucky Baptist Hospital	Louisville	Church	150	4,254	..	100	R	5	12	July	(25)	None 40	$25		Oct
Louisville City Hospital [1-3]✦	Louisville	City	586	12,422	100	..	R	18	12	July	(26)	Req 40	$9.25		Nov
Norton Memorial Infirmary	Louisville	NPAssn	165	3,887	6	94	R	6	12	July	No	None 29	$20		Nov
St. Anthony's Hospital	Louisville	Church	163	2,888	..	..	R	4	12	July	(25)	None 17	$26-$34		Jan
St. Joseph Infirmary ✦	Louisville	Church	325	6,187	10	100	R	8	12	July	(25)	None 30	$15(n)		Nov
SS. Mary and Elizabeth Hospital	Louisville	Church	180	3,739	..	..	R	3	12	July	No	None 23	$40		Jan
LOUISIANA															
Charity Hospital [1-3]✦	New Orleans	State	3,133	57,594	100	..	R	155	12	July	No	Req 47	$10		Nov
Hotel Dieu, Sisters' Hospital	New Orleans	Church	283	9,820	..	..	R	10	12	July	No	None 23	$50		Nov
Mercy Hospital-Sonlat Memorial	New Orleans	Church	142	3,845	..	..	R	4	12	July	No	Req 32	$30		Nov
Southern Baptist Hospital ✦	New Orleans	Church	364	14,357	14	86	R	14	12	July	No	None 28	$30(i)		Nov
Touro Infirmary [1]✦	New Orleans	NPAssn	440	11,818	35	100	R	22	12	July	No	Req 71	$10		Nov
United States Marine Hospital [2]	New Orleans	USPHS	572	5,412	100	..	R	12	12	July	(27)	Req 35	$62.50		Varies
Highland Sanitarium	Shreveport	Corp	116	3,221	..	..	R	3	12	July	No	None 29	$50		Jan
North Louisiana Sanitarium	Shreveport	Corp	110	2,856	..	2	100	R	3	12	July	(28)	Req 45	$50	Dec
T. E. Schumpert Memorial Sanitarium	Shreveport	Church	114	3,321	..	..	R	2	12	July	No	None 16	$50		Dec
Shreveport Charity Hospital	Shreveport	State	849	23,294	100	..	R	30	12	July	No	None 36	$10		Nov
Tri-State Hospital	Shreveport	Corp	119	4,397	..	75	R	3	12	July	No	None 41	$50		Sept
MAINE															
Eastern Maine General Hospital [1]	Bangor	NPAssn	243	4,281	31	..	R	5	12	July	No	Req 27	$20		Nov
Central Maine General Hospital [1]	Lewiston	NPAssn	231	4,023	68	100	R	6	12	July	No	Req 44	No		Jan
St. Mary's General Hospital [1]	Lewiston	Church	165	3,210	45	25	R	4	12	July	No	None 26	$20		Nov
Maine General Hospital	Portland	NPAssn	281	6,639	..	..	R	6	18	JanJuly	No	Req 37	No		Nov
MARYLAND															
United States Naval Hospital	Annapolis	Navy	192	1,856	100	..	R	..	12	July	(29)	None 62	(b)		Varies
Baltimore City Hospitals [1-3]✦	Baltimore	City	1,450	8,259	100	..	RMS	44	12	July	No	Req 47	No		Nov
Bon Secours Hospital ✦	Baltimore	Church	175	3,852	24	100	R	4	12	July	No	Req 25	$15		Nov
Church Home and Infirmary [1]✦	Baltimore	Church	178	3,388	30	100	R&S	7	12	July	No	Req 54	$15		Nov
Franklin Square Hospital ✦	Baltimore	NPAssn	227	2,772	50	100	R	6	12	July	No	Req 28	$10(i)		Dec
Hospital for Women [1]✦	Baltimore	NPAssn	162	2,681	33	100	R	5	12	July	No	Req 22	No		Nov
Johns Hopkins Hospital [1-3]✦	Baltimore	NPAssn	972	16,341	74	100	R&S	70	12	JulySept	No	Req 74	No		Nov
Maryland General Hospital [1]✦	Baltimore	Church	280	5,125	16	..	R	10	12	July	No	Req 22	$10		Nov
Mercy Hospital ✦	Baltimore	Church	326	7,682	41	..	R	10	12	July	No	Req 41	No		Nov
Provident Hospital and Free Dispensary ✦	Baltimore	NPAssn	148	1,920	61	75	M	7	12	JulyOct	No	Req 17	$10		Jan
St. Joseph's Hospital ✦	Baltimore	Church	281	6,150	55	100	R	8	12	July	No	Req 25	$5		Nov
Sinai Hospital ✦	Baltimore	NPAssn	300	5,498	35	100	S&M	17	12	July	No	Req 42	No		Nov
South Baltimore General Hospital [1]✦	Baltimore	NPAssn	170	3,435	..	100	R	6	12	July	No	Req 33	$30		Nov
Union Memorial Hospital ✦	Baltimore	NPAssn	352	6,806	14	100	R	16	12	July	No	Req 38	No		Nov
United States Marine Hospital [2]	Baltimore	USPHS	531	5,597	100	..	M	12	12	July	(30)	Op 61	$32.50		Dec
University Hospital [1-3]✦	Baltimore	State	485	9,067	40	100	R	12	24	July	(31)	Req 56	No		Nov
West Baltimore General Hospital ✦	Baltimore	Corp	169	3,739	39	100	R	7	12	July	(32)	Req 42	$15		Nov

Numerical and other references will be found on page 766.

Name of Hospital	Location	Control	Capacity	Total Patients Treated	% Service Cases	% Priv. Pts. Worked Up by Interns	Type of Internship	Interns Appointed Annually	Length of Service in Months	Service Commences	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Appointments Made
MASSACHUSETTS															
Beverly Hospital ✦	Beverly	NPAssn	161	2,957	56	..	R	4	12	July-Sept	No	Req 85	No	....	
Beth Israel Hospital ✦	Boston	NPAssn	215	6,051	46	46	S	8	12-22	Varies	No	Req 48	No	Nov	
Boston City Hospital [1,3]✦	Boston	City	2,569	44,875	100	..	S	64	12-28	Varies	No	Req 47	No	Jan	
Carney Hospital ✦	Boston	Church	240	4,624	..	99	S	6	16&24	JanMaySept	No	Req 25	No	Jan	
Faulkner Hospital	Boston	NPAssn	170	4,023	..	..	R	3	12	JuneOct	No	Req 62	No	Nov	
Massachusetts General Hospital [1,3]✦	Boston	NPAssn	466	7,591	100	..	S	25	12-25	Varies	(85)	Req 63	No	Oct	
Massachusetts Memorial Hospitals [1,3]✦	Boston	NPAssn	429	6,935	..	100	S	15	12-24	July	(53)	Req 76	No	Nov	
New England Hospital for Women and Children [2]	Boston	NPAssn	260	4,029	50	37	R	8	18	JanJuly	No	Req 37	No	Nov	
Peter Bent Brigham Hospital [3]✦	Boston	NPAssn	247	5,348	..	..	S	18	12-29	(g)	(34)	Req 63	No	Nov	
St. Elizabeth's Hospital	Boston	Church	300	5,004	21	78	R	4	24	Quarterly	No	Req 18	No	Varies	
United States Marine Hospital	Boston	USPHS	336	2,076	100	..	R	5	12	July	No	Req 40	$62.50	Jan	
Brockton Hospital	Brockton	NPAssn	155	2,615	..	19	R	4	12	June-Aug	No	Req 47	$10	July	
Cambridge City Hospital	Cambridge	City	332	7,459	67	..	R	6	24	(g)	No	Req 24	No	Dec	
Cambridge Hospital ✦	Cambridge	NPAssn	278	5,048	33	5	R&S	5	12	Quarterly	(35)	Req 27	No	Nov	
Chelsea Memorial Hospital	Chelsea	Corp	115	2,014	40	20	R	2	12	JanJuly	No	Req 30	$50	Jan	
United States Naval Hospital	Chelsea	Navy	461	3,503	100	..	R	..	12	July	No	None 56	(b)	Varies	
Union Hospital [1]	Fall River	NPAssn	181	2,908	45	90	R	3	12	JuneJuly	No	Req 31	$40	Apr	
Burbank Hospital [1]	Fitchburg	Corp	236	3,690	51	..	R	4	12	JulyOct	No	Req 36	$25	Nov	
Haverhill Municipal Hospital (Hale)	Haverhill	City	196	4,786	48	..	R	2	12	July	No	None 46	$10	Oct	
Holyoke Hospital	Holyoke	NPAssn	150	2,557	34	66	R	3	12	July	No	Req 30	$25	Jan	
Providence Hospital	Holyoke	Church	200	3,336	15	85	R	4	12	JanJuly	No	None 22	$25	JanJuly	
Lawrence General Hospital	Lawrence	NPAssn	142	3,306	43	..	R	3	12	July	No	Req 36	$10	Feb	
Lowell General Hospital	Lowell	NPAssn	186	2,975	39	..	R	3	12	JulyOct	No	Req 30	$25	Fall	
St. John's Hospital	Lowell	Church	200	3,710	35	10	R	4	12	July	No	Req 44	$10	Nov	
St. Joseph's Hospital	Lowell	Church	133	2,898	50	..	R	3	12	July	No	Req 21	$12	June	
Lynn Hospital	Lynn	NPAssn	227	5,563	59	..	R	6	18	JanJuly	No	Req 38	$25	Nov	
St. Luke's Hospital	New Bedford	NPAssn	339	6,760	..	..	R	6	12	July	No	Req 33	No	Dec	
Newton Hospital	Newton	NPAssn	304	5,604	52	..	R	6	12	JuneSept	No	Req 30	No	Nov	
House of Mercy Hospital	Pittsfield	NPAssn	235	3,525	21	..	R	3	12	July	No	Req 27	$40	March	
St. Luke's Hospital	Pittsfield	Church	189	3,671	19	..	R	3	12	JanJuly	No	None 29	$50	Nov	
Quincy City Hospital	Quincy	City	300	7,444	32	68	R	6	18	JanJuly	(30)	None 35	$25	Nov	
Salem Hospital [3]	Salem	NPAssn	186	5,332	48	..	R	5	12	JanJuly	(37)	Req 47	$25	Nov	
Mercy Hospital	Springfield	Church	365	6,390	40	90	R	6	12	JuneJuly	No	None 19	$25	Fall	
Springfield Hospital	Springfield	NPAssn	265	6,270	40	75	R	6	24	July	(38)	Req 34	No	Nov	
Wesson Memorial Hospital [1]	Springfield	NPAssn	125	2,723	49	10	R	3	18	JanJuly	(39)	None 24	$25	Varies	
Waltham Hospital	Waltham	NPAssn	214	2,791	69	55	R	4	12	July	No	Req 29	$15(b)	Varies	
Memorial Hospital ✦	Worcester	NPAssn	215	4,852	..	100	R	10	20	July	No	Req 60	No	Nov	
St. Vincent Hospital	Worcester	Church	267	4,777	30	95	R	6	12	July	No	None 24	$20	Nov	
Worcester City Hospital [3]✦	Worcester	City	540	10,321	86	99	R	9	24	July(p)	No	Req 34	No	Nov	
Worcester Hahnemann Hospital	Worcester	NPAssn	140	2,234	13	100	R	3	12	July	No	None 62	$35	Jan	
MICHIGAN															
University Hospital [1,3]✦	Ann Arbor	State	1,365	16,325	100	..	R	35	12	July	No	Req 66	No	Nov	
Leila Y. Post Montgomery Hospital	Battle Creek	Church	161	3,360	..	8	R	4	12	July	No	Req 30	$50	Dec	
Mercy Hospital [1]	Bay City	Church	140	4,053	..	100	R	3	12	July	No	None 25	$50	Nov	
City of Detroit Receiving Hospital [4]✦	Detroit	City	650	18,826	100	..	R	20	12	July	(40)	Req 39	$25	Nov	
Evangelical Deaconess Hospital [1]	Detroit	Church	215	5,411	..	..	R	5	12	July	No	Op 29	$20	Dec	
Grace Hospital [1,3]✦	Detroit	NPAssn	582	13,464	30	100	R	26	12	JulySept	(40)	Req 31	$25	Nov	
Harper Hospital ✦	Detroit	NPAssn	685	17,677	11	100	R	35	12	July	(41)	Op 36	No	Nov	
Henry Ford Hospital [3]✦	Detroit	NPAssn	600	12,800	95	100	R	35	12	Sept	No	Op 37	$125(a)	Nov	
Mount Carmel Mercy Hospital	Detroit	Church	385	7,409	..	..	R	10	12	July	No	Req 53	$25	Nov	
Providence Hospital ✦	Detroit	Church	424	10,380	..	..	R	17	12	July	(42)	None 53	$20	Nov	
St. Joseph's Mercy Hospital	Detroit	Church	215	5,268	6	..	R	6	12	July	No	Req 35	$35	Nov	
St. Mary's Hospital	Detroit	Church	375	6,435	32	53	R	12	12	July	No	Req 50	$25	Nov	
United States Marine Hospital	Detroit	USPHS	291	2,381	100	..	R	4	12	July	No	Req 66	$62.50	Dec	
Eloise Hospital and Infirmary-William J. Seymour Hospital [4]✦	Eloise	County	607	9,024	100	..	R	24	12	July	(40)	Req 60	$25	Dec	
Hurley Hospital [4]✦	Flint	City	382	10,787	..	100	R	12	12	July	No	Req 34	$30(l)	Nov	
Blodgett Memorial Hospital [4]✦	Grand Rapids	NPAssn	154	3,888	19	100	R	5	12	July	No	None 53	$20	Nov	
Butterworth Hospital ✦	Grand Rapids	NPAssn	272	7,145	10	100	R	6	12	July	No	None 45	$20	Nov	
St. Mary's Hospital ✦	Grand Rapids	Church	255	6,298	16	90	R	6	12	July	No	Req 43	$10-30	Fall	
Highland Park General Hospital [1]	Highland Park	City	300	4,750	11	100	R	7	12	July	No	Req 18	$25	Nov	
W. A. Foote Memorial Hospital [1]	Jackson	City	156	3,613	..	..	R	4	12	July	No	Req 49	$25-50	Fall	
Mercy Hospital [1]	Jackson	Church	150	2,944	..	100	R	3	12	July	(43)	None 32	$60	Oct	
Edward W. Sparrow Hospital [1]	Lansing	NPAssn	163	4,960	15	100	R	5	12	July	(44)	None 50	$65	Sept	
St. Lawrence Hospital [1]	Lansing	Church	199	4,801	..	100	R	4	12	July	(45)	None 48	$40	Jan	
Pontiac General Hospital [1]	Pontiac	City	150	3,750	..	100	R	4	12	July	(46)	None 45	$25	Varies	
Saginaw General Hospital [3]	Saginaw	NPAssn	152	3,559	..	100	R	3	12	July	No	None 29	$45	Varies	
St. Mary's Hospital	Saginaw	Church	192	4,689	..	80	R	4	12	July	No	None 20	$50	Nov	
MINNESOTA															
St. Luke's Hospital ✦	Duluth	NPAssn	270	6,786	..	100	R	9	12	July	(47)	Req 68	$20	Nov	
St. Mary's Hospital	Duluth	Church	200	6,727	..	100	R	9	12	July	(47)	Req 58	$20	Nov	
Asbury Hospital [1]	Minneapolis	Church	138	3,578	..	..	R	6	12	July	No	None 34	$25	Varies	
Minneapolis General Hospital [1,3]✦	Minneapolis	City	1,000	..	100	..	R	24	18	JanJuly	No	Req 61	$7.50	MarOct	
Northwestern Hospital	Minneapolis	NPAssn	120	4,330	..	..	R	9	12	July	No	None 50	$25(f)	JanJuly	
St. Barnabas Hospital [1]	Minneapolis	NPAssn	165	4,693	..	100	R	4	12	JanAprJuly	No	None 66	$25(n)	Nov	
St. Mary's Hospital [2]	Minneapolis	Church	260	6,660	..	100	R	7	12	July	No	None 46	$15(h)	Sept	
Swedish Hospital	Minneapolis	NPAssn	275	8,356	..	..	R	4	12	July	No	None 23	$25	Fall	
University Hospitals [1,3]✦	Minneapolis	State	475	8,785	88	100	R	28	12	July	No	Req 70	No	Nov	
Ancker Hospital [3]✦	St. Paul	CyCo	900	10,948	100	..	R	32	12	July	No	Req 69	No	Nov	
Bethesda Hospital [1]	St. Paul	Church	166	4,962	..	..	R	6	12	July	(48)	None 42	$25	Nov	
Charles T. Miller Hospital	St. Paul	NPAssn	250	6,120	19	97	R	7	12	July	(49)	Req 47	$25	Nov	
St. Joseph's Hospital	St. Paul	Church	280	9,169	3	90	R	10	12	July	(48)	None 49	$25	Dec	
MISSOURI															
St. Louis County Hospital [3]✦	Clayton	County	210	3,926	98	..	R	6	12	July	No	Req 48	$25	Nov	
Kansas City General Hospital [3]✦	Kansas City	City	640	11,254	100	..	R	28	12	July	No	Req 78	$20	Nov	
Kansas City General Hospital No. 2 [1]	Kansas City	City	292	3,449	100	..	R	11	12	July	No	Req 32	$17.50	May	
Menorah Hospital	Kansas City	NPAssn	155	3,709	..	100	R	6	12	July	No	Req 31	$25	Nov	
Research Hospital	Kansas City	NPAssn	211	5,271	..	100	R	6	12	July	No	None 66	$25	Nov	
St. Joseph Hospital ✦	Kansas City	Church	271	6,864	5	100	R	8	12	June	No	None 74	$25	Nov	
St. Luke's Hospital ✦	Kansas City	Church	266	5,976	..	..	R	7	12	July	No	None 76	$25	Nov	
St. Mary's Hospital ✦	Kansas City	Church	175	4,499	20	100	R	5	12	July	No	None 66	$25	Nov	
Trinity Lutheran Hospital	Kansas City	Church	134	3,256	..	100	R	4	12	July	No	None 55	$25(m)	Nov	
Missouri Methodist Hospital [1]	St. Joseph	Church	170	3,776	..	..	R	4	12	July	No	None 27	$30	Jan	
St. Joseph's Hospital	St. Joseph	Church	168	3,657	..	..	R	4	12	July	No	None 41	$50	Nov	
Barnes Hospital [4]✦	St. Louis	Church	400	10,953	33	67	S	27	12&18	JulyDec	(50)	Req 64	No	Dec	
De Paul Hospital	St. Louis	Church	285	8,804	23	100	R	9	12	July	No	Req 31	$25	Nov	
Evangelical Deaconess Home and Hospital [1]	St. Louis	Church	209	6,325	..	..	R	9	12	July	No	None 21	$25	Fall	

Numerical and other references will be found on page 766.

Name of Hospital	Location	Control	Capacity	Total Patients Treated	% Service Cases	% Priv. Pts. Worked Up by Interns	Type of Internship	Interns Appointed Annually	Length of Service in Months	Service Commences	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Appointments Made
MISSOURI—Continued															
Homer G. Phillips Hospital [1,♦]	St. Louis	City	742	9,008	100	..	R	30	12	July	No	Req 39		$10(e)	Apr
Jewish Hospital ♦	St. Louis	NPAssn	283	6,944	22	100	R	11	12	July (51)	Req	35		$15	Nov
Lutheran Hospital	St. Louis	Church	180	4,482	3	97	R	4	12	July	No	None 20		$50	Jan
Missouri Baptist Hospital ♦	St. Louis	Church	430	6,083	..	..	R	8	12	July	No	None 39		$25	Dec
St. Anthony's Hospital	St. Louis	Church	250	5,008	59	100	R	7	12	July (52)	Op	35		$25	Nov
St. John's Hospital	St. Louis	Church	319	6,565	..	..	R	11	12	July (53)	Req	39		$20	Nov
St. Louis City Hospital [1,3,♦]	St. Louis	City	1,060	16,178	100	..	R	67	12	July	No	Req 48		$10(e)	Nov
St. Luke's Hospital ♦	St. Louis	Church	206	5,073	17	100	R	9	12	July (53)	Req	44		$20	Nov
St. Mary's Group of Hospitals ♦	St. Louis	Church	731	11,435	13	100	R	28	12	July (54)	Req	56		No	Nov
St. Mary's Infirmary	St. Louis	Church	150	1,814	..	100	R	3	12	July	No	None 43		$25	Varies
MONTANA															
Murray Hospital	Butte	Corp	120	2,581	..	100	R	3	12	July	No	Req 38		$75(j)	June
St. James Hospital	Butte	Church	180	3,023	25	..	R	3	12	July	No	Req 23		$50	Jan
NEBRASKA															
Bryan Memorial Hospital [1]	Lincoln	Church	120	1,985	..	..	R	3	12	July	No	None 45		$25	July
Lincoln General Hospital [1]	Lincoln	City	230	2,923	..	..	R	4	12	July	No	None 34		$25	Nov
St. Elizabeth Hospital	Lincoln	Church	200	3,812	..	..	R	4	12	July	No	None 35		$25	Nov
Bishop Clarkson Memorial Hospital [1,♦]	Omaha	Church	150	3,411	..	..	R	4	12	June	No	None 38		$25	Varies
Creighton Memorial St. Joseph's Hosp. [3,♦]	Omaha	Church	411	8,386	11	100	R	6	24	July	No	Req 29		$20(l)	Nov
Immanuel Deaconess Institute	Omaha	Church	150	3,449	..	..	R	4	12	June	No	None 39		$25	Dec
Nebraska Methodist Episcopal Hospital	Omaha	Church	180	4,174	..	..	R	5	12	June	No	None 32		$25(l)	Jan
St. Catherine's Hospital [1]	Omaha	Church	190	3,497	..	100	R	4	12	July	No	None 24		$25	Dec
University of Nebraska Hospital ♦	Omaha	State	230	3,448	100	..	R	12	12	July	No	Req 86		$25	Nov
NEW HAMPSHIRE															
Margaret Pillsbury General Hospital	Concord	NPAssn	123	2,122	39	..	R	2	12	July	No	Req 43		$10	Varies
Mary Hitchcock Memorial Hospital ♦	Hanover	NPAssn	196	4,686	55	100	R	4	24&30	Quarterly	No	None 78		$8.33	Nov
United States Naval Hospital	Portsmouth	Navy	152	578	100	..	R	3	12	Varies	No	None 30		(b)	Varies
NEW JERSEY															
Atlantic City Hospital ♦	Atlantic City	NPAssn	300	5,563	67	100	R	8	12	July	No	Req 34		$25	Nov
Cooper Hospital ♦	Camden	NPAssn	375	6,771	60	100	R	12	12	July	No	Req 42		$10	Nov
West Jersey Homeopathic Hospital [1,♦]	Camden	NPAssn	330	5,216	78	100	R	8	12	July	No	Req 37		$25	Oct
East Orange General Hospital	East Orange	NPAssn	150	2,946	45	19	R	4	12	July	No	Req 33		$25	Oct
Alexian Bros. Hospital (male patients only)	Elizabeth	Church	160	2,523	62	95	R	5	12	July (55)	Req	33		$50	March
Elizabeth General Hospital and Dispensary	Elizabeth	NPAssn	250	6,314	38	100	R	5	24	July	No	Req 31		$15	July
St. Elizabeth Hospital	Elizabeth	Church	262	4,343	37	41	R	7	12	July	No	Req 16		$15	Nov
Englewood Hospital [1,3]	Englewood	NPAssn	238	4,750	..	..	R	6	18	JanJuly	No	Req 19		$20	JanJuly
Hackensack Hospital [1]	Hackensack	NPAssn	292	8,918	56	100	R	5	24	July	No	Req 27		$25	Fall
St. Mary's Hospital	Hoboken	Church	400	6,635	72	25	R	6	12	July	No	Req 36		$25	Nov
Christ Hospital [1]	Jersey City	Church	246	4,773	43	100	R	6	12	July	No	Req 46		$25	Nov
Jersey City Hospital [1,♦]	Jersey City	City	900	18,841	99	..	R	40	12-24	JanJuly	(56)	Req 18		No	Nov
St. Francis Hospital	Jersey City	Church	240	3,526	60	15	R	7	12	JanJuly	(56)	Req 15		$25	Nov
Monmouth Memorial Hospital [3]	Long Branch	NPAssn	211	5,025	62	100	R	6	18	JanJuly	(57)	Req 26		$15	Dec
Mountainside Hospital [1,♦]	Montclair	NPAssn	330	6,015	38	86	R	6	24	July	No	Req 31		$15	JulyNov
Morristown Memorial Hospital	Morristown	NPAssn	155	3,224	54	59	R	5	12	June-Sept	No	Req 28		$30	Nov
Burlington County Hospital ♦	Mount Holly	NPAssn	145	2,291	65	100	R	4	12	July	(58)	Req 62		$50	April
Fitkin Memorial Hospital	Neptune	NPAssn	189	4,326	57	95	R	6	12	July	No	Req 21		$25	Nov
Hospital of St. Barnabas and for Women and Children [1]	Newark	Church	235	5,124	39	..	R	6	12	July	No	Req 35		$25	Nov
Newark Beth Israel Hospital [1,♦]	Newark	NPAssn	455	10,637	39	100	R	12	18	JanJuly	No	Req 39		$15	Sept
Newark City Hospital [1,3,♦]	Newark	City	740	14,986	100	..	R	12	24	Quarterly	No	None 23		$15-20	Sept
Newark Memorial Hospital	Newark	NPAssn	165	2,959	39	75	R	4	12	July	No	Req 28		$25	Spring
St. James Hospital [1]	Newark	Church	152	2,884	53	35	R	3	12	July	No	Op 16		$30	Nov
St. Michael's Hospital	Newark	Church	350	6,044	56	..	R	7	12	JulySept	(56)	Req 20		$25	Nov
St. Peter's General Hospital	New Brunswick	Church	242	4,044	40	..	R	5	12	July	No	Req 20		$20	Nov
Orange Memorial Hospital	Orange	NPAssn	439	7,328	31	..	R	8	12	July	No	Req 18		$25	Nov
St. Mary's Hospital	Orange	Church	150	2,984	31	..	R	3	12	July	No	Req 30		$25	Jan
Passaic General Hospital	Passaic	NPAssn	225	4,115	42	..	R	4	12	July	No	Req 28		$25	Nov
St. Mary's Hospital [1]	Passaic	Church	219	4,814	45	..	R	4	12	July	No	Req 30		$25	Nov
Nathan and Miriam Barnert Memorial Hosp. [1]	Paterson	NPAssn	145	3,147	48	..	R	5	12	JulySept	No	Req 45		$15-20	Nov
Paterson General Hospital	Paterson	NPAssn	328	7,060	..	..	R	4	24	July	No	Op 28		$12.50(m)	Nov
St. Joseph's Hospital	Paterson	Church	433	6,240	58	..	R	5	24	July	No	Req 26		$15-25	Sept
Perth Amboy General Hospital [1]	Perth Amboy	NPAssn	190	4,543	35	100	R	4	12	JanJuly	No	None 18		$25	AprOct
Muhlenberg Hospital [3]	Plainfield	NPAssn	305	6,017	42	100	R	4	24	July	No	Req 25		$25-35	Nov
Holy Name Hospital	Teaneck	Church	225	4,249	33	100	R	8	12	July	No	Req 40		$25	Dec
Mercer Hospital	Trenton	NPAssn	261	4,765	42	85	R	7	12	July	No	Req 22		$25	Nov
St. Francis Hospital	Trenton	NPAssn	328	5,487	38	100	R	7	12	July	No	Req 21		$25	Oct
William McKinley Memorial Hospital	Trenton	NPAssn	157	3,636	48	90	R	4	12	July	No	Req 19		$25	Jan
North Hudson Hospital [1,3]	Weehawken	NPAssn	191	3,276	75	100	R	7	12	JanJulySept	(56)	Req 31		$25	Varies
NEW YORK															
Albany Hospital [1,3,♦]	Albany	NPAssn	656	11,610	48	100	R	27	12&24	July	No	Req 73		(q)	Nov
Memorial Hospital [1]	Albany	NPAssn	136	2,752	27	..	R	5	12	JulySept	No	Req 32		$25	Jan
St. Peter's Hospital	Albany	Church	155	3,780	23	5	R	5	12	July	(59)	Req 31		$10	Nov
Binghamton City Hospital [3]	Binghamton	City	550	6,945	42	..	R	7	24	July	No	Req 28		$25	Nov
Beth-El Hospital [3]	Brooklyn	NPAssn	270	7,949	41	59	R	10	12&24	JanJuly	No	Req 29		No	Nov
Beth-Moses Hospital [3]	Brooklyn	NPAssn	225	4,067	52	48	R	8	24	JanJuly	No	Req 21		$10	Dec
Brooklyn Hospital ♦	Brooklyn	NPAssn	410	7,349	56	100	R	10	24	July	No	Req 44		No	Oct
Bushwick Hospital	Brooklyn	NPAssn	130	2,536	39	..	R	4	24	July	No	Req 28		No	Dec
Coney Island Hospital [1,♦]	Brooklyn	City	469	7,853	100	..	R	11	24	July	No	Req 30		$18	Sept
Cumberland Hospital [3,♦]	Brooklyn	City	400	7,807	100	..	R&S	14	12&24	July	No	Op 56		$18	Nov
Greenpoint Hospital [1,3,♦]	Brooklyn	City	300	6,629	100	..	R	10	24	July	No	Req 34		$18	Oct
Israel-Zion Hospital [1,♦]	Brooklyn	NPAssn	522	10,187	32	69	R	18	24	JanJuly	No	Req 28		No	Nov
Jewish Hospital [1,3,♦]	Brooklyn	NPAssn	661	12,735	43	100	R&S	36	12-24	JanJuly	(32)	Req 47		No	Nov
Kings County Hospital [3,♦]	Brooklyn	City	2,400	57,606	100	..	RMS	68	12&24	July	No	Req 23		$18	Oct
Long Island College Hospital [1,♦]	Brooklyn	NPAssn	464	8,235	53	..	R&S	21	12	July	(60)	Req 38		No	Jan
Methodist Hospital ♦	Brooklyn	Church	490	7,875	38	100	R	7	24	July	No	Req 44		No	Nov
Norwegian Lutheran Deaconesses' Home and Hospital [1,♦]	Brooklyn	Church	200	4,682	70	100	R	8	12	July	No	Req 33		No	Nov
St. Catherine's Hospital	Brooklyn	Church	353	5,954	51	100	R	8	24	July	No	Req 30		No	Dec
St. John's Hospital ♦	Brooklyn	Church	234	5,657	60	75	R	4	36	July	No	Req 44		No	Nov
St. Mary's Hospital ♦	Brooklyn	Church	306	5,034	60	90	R	8	24	July	No	Req 34		No	Fall
St. Peter's Hospital	Brooklyn	Church	232	4,547	75	100	R	4	24	July	No	None 23		(r)	Nov
United States Naval Hospital	Brooklyn	Navy	520	4,487	100	..	R	..	12	July	No	Req 40		(b)	Varies
Unity Hospital	Brooklyn	NPAssn	248	5,304	57	100	R	6	24	July	No	Req 40		$15	Nov
Wyckoff Heights Hospital	Brooklyn	NPAssn	199	4,148	35	100	M	6	18-24	JanJuly	No	Req 17		No	Varies
Buffalo General Hospital [1,♦]	Buffalo	NPAssn	475	11,390	48	52	R	15	12	July	No	Req 43		No	Nov
Buffalo Hospital of the Sisters of Charity	Buffalo	Church	232	4,356	21	79	R	14	12	July	(61)	Req 27		$25	Sept

Numerical and other references will be found on page 766.

Name of Hospital	Location	Control	Capacity	Total Patients Treated	% Service Cases	% Priv. Pts. Worked Up by Interns	Type of Internship	Interns Appointed Annually	Length of Service in Months	Service Commences	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Appointments Made
NEW YORK—Continued															
Deaconess Hospital ✦	Buffalo	NPAssn	238	5,372	..	..	R	6	12	July	No	Req	34	$25	Dec
Edward J. Meyer Memorial Hospital [1-3] (Buffalo City Hospital)	Buffalo	City	1,063	9,872	100	..	R	15	12	July	(62)	Req	33	$30(a)	Nov
Mercy Hospital	Buffalo	Church	198	4,320	33	100	R	4	12	July	No	Req	21	$30	Full
Millard Fillmore Hospital ✦	Buffalo	NPAssn	327	7,756	9	100	R	7	12	July	(63)	Req	44	$15	Nov
Mary Imogene Bassett Hospital [1✦]	Cooperstown	NPAssn	105	2,011	..	..	R&S	6	12&24	June	No	None	52	$40	Nov
Arnot-Ogden Memorial Hospital	Elmira	NPAssn	210	4,404	26	85	R	4	12	July	(64)	None	34	$20(l)	Nov
St. Joseph's Hospital	Elmira	Church	217	4,001	..	..	R	5	12	July	No	None	27	$25	Jan
Ideal Hospital	Endicott	City	146	2,488	..	100	R	3	12	July	No	None	37	$20	Feb
Flushing Hospital and Dispensary [3]	Flushing	NPAssn	300	5,816	33	100	R	4	24	July	No	Req	33	$25	Nov
Meadowbrook Hospital [1✦]	Hempstead	County	268	5,850	99	..	R	7	24	July	No	Req	53	$25	Oct
Jamaica Hospital [1]	Jamaica	NPAssn	229	5,036	31	..	R	5	24	July	No	Req	32	$15	Jan
Mary Immaculate Hospital [2✦]	Jamaica	Church	316	6,530	48	..	R	8	24	July	No	Req	31	No	Nov
Queens General Hospital [1-3✦]	Jamaica	City	696	13,965	100	..	R&M	19	24	July	No	Op	67	$18	July
Charles S. Wilson Memorial Hospital [3✦]	Johnson City	NPAssn	350	5,282	..	100	R	7	24	July	(65)	Req	45	$35(e)	Dec
Our Lady of Victory Hospital	Lackawanna	Church	174	3,024	17	100	R	4	12	July	(66)	Req	31	$30	Nov
St. John's Long Island City Hospital [3]	Long Island City	Church	388	5,879	76	100	R	8	24	July	No	Req	46	$15	Oct
Nassau Hospital	Mineola	NPAssn	257	4,924	33	..	R	4	12	July	No	None	27	$50	Nov
Mount Vernon Hospital	Mount Vernon	NPAssn	260	4,554	35	..	R	3	24	July	No	Req	43	(8)	Nov
New Rochelle Hospital ✦	New Rochelle	NPAssn	303	5,908	33	..	R	8	12	July	No	Req	41	No	Nov
Beekman Hospital [1-3✦]	New York	NPAssn	96	2,019	..	100	M	8	18	JanJuly	Req	57	$30	Nov
Bellevue Hospital [1-3✦]	New York	City	2,583	67,892	100	..	RMS	98	12-24	JanJuly	No	Req	33	$18	DecJune
Beth David Hospital	New York	NPAssn	200	3,885	57	100	R	6	24	JanJuly	No	Req	35	No	Nov
Beth Israel Hospital [1-3✦]	New York	NPAssn	394	8,549	52	100	R	12	24	July	No	Req	33	$15	Nov
Bronx Hospital [2✦]	New York	NPAssn	409	8,674	45	20	R	8	24	Quarterly	No	Req	41	(f)	Dec
Columbus Hospital	New York	Church	300	4,552	80	100	R	6	18	JanJuly	No	Req	22	No	July
Flower and Fifth Avenue Hospitals [1-3✦]	New York	NPAssn	411	7,763	39	100	R	12	24	July	(67)	Req	26	No	July
Fordham Hospital [3✦]	New York	City	609	12,075	100	..	R	24	12&24	MarJulyNov	No	Req	38	$18	Dec
French Hospital ✦	New York	NPAssn	232	5,893	53	98	R	9	12&24	Quarterly	No	Op	32	$18	Nov
Gouverneur Hospital [3]	New York	City	220	4,619	100	..	R	12	12&24	JanJuly	No	Req	20	$18	Dec
Harlem Hospital [1-3✦]	New York	City	763	20,350	100	..	R	24	24	JanJuly	No	Op	26	$18	Varies
Hospital for Joint Diseases [3✦]	New York	NPAssn	355	6,336	..	..	R	6	24	JanJuly	(68)	Req	47	$15	Nov
Jewish Memorial Hospital [3]	New York	NPAssn	209	5,571	34	29	R	6	24	JanJuly	No	Req	52	(n)	Dec
Knickerbocker Hospital [3]	New York	NPAssn	223	3,651	60	..	R	8	24	JanJuly	No	Req	45	No	Nov
Lebanon Hospital [1]	New York	NPAssn	154	2,930	93	8	M	4	24	AprOct	No	Req	29	$15	Dec
Lenox Hill Hospital [1-3✦]	New York	NPAssn	622	10,384	60	..	R	12	24	JanJuly	No	Req	58	$40yr	Oct
Lincoln Hospital [3✦]	New York	City	469	10,582	100	..	R	18	24	JanJuly	No	Op	31	$18	Oct
Metropolitan Hospital [1-3✦]	New York	City	1,111	12,050	100	..	R	21	24	July	No	Req	34	$18	Oct
Misericordia Hospital	New York	Church	261	4,651	21	100	R	4	24	JanJuly	No	Req	32	$20	Varies
Montefiore Hosp. for Chronic Diseases [1-3✦]	New York	NPAssn	714	1,787	..	100	M&S	11	12	JanJuly	No	Req	71	$25	FallSpr
Morrisania City Hospital [3✦]	New York	City	539	12,543	100	..	R	16	24	JanJuly	No	Req	31	$18	Dec
Mount Sinai Hospital [1-3✦]	New York	NPAssn	856	16,984	67	..	M	14	24	MarJulyNov	No	Op	48	(n)	Oct
New York City Hospital [3✦]	New York	City	880	10,590	100	..	RMS	22	12&24	July	No	Req	42	$18	Nov
New York Hospital [1-3✦]	New York	NPAssn	1,058	16,412	..	..	S	42	12&24	JanJuly	(69)	Req	64	No	Nov
New York Infirmary for Women and Children ✦	New York	NPAssn	165	3,456	50	90	R	5	12&24	JuneSept	No	Req	63	$10	Nov
New York Polyclinic Medical School and Hospital [3✦]	New York	NPAssn	408	7,812	..	100	R	4	24	Quarterly	No	Req	23	No	JanMaySept
New York Post-Graduate Medical School and Hospital [3✦]	New York	NPAssn	415	9,139	47	100	M	6	12&24	Quarterly	No	Req	37	No	Oct
Presbyterian and Sloane Hospitals [1-3✦]	New York	NPAssn	1,030	18,017	59	99	M&S	14	12-25	(1)	No	Req	49	No	Nov
Roosevelt Hospital [3✦]	New York	NPAssn	397	7,369	76	..	S	14	30&36	JanJuly	No	Req	45	No	Varies
St. Clare's Hospital [1]	New York	Church	208	5,407	60	100	M	4	24	JanJuly	No	Req	37	$10	JanJuly
St. Francis Hospital	New York	Church	370	6,214	78	100	M	5	30	Jan	No	None	22	No	Nov
St. Luke's Hospital [3✦]	New York	NPAssn	522	9,515	88	..	M	8	12&24	JanJuly	No	Req	51	No	Nov
St. Vincent's Hospital [4✦]	New York	Church	465	9,264	80	..	R	14	30	JanJuly	No	Req	39	(n)	Nov
Sydenham Hospital ✦	New York	NPAssn	203	4,284	60	100	R&M	10	12&24	JanJuly	No	Req	53	No	Dec
Welfare Hospital for Chronic Diseases [1-3✦]	New York	City	1,565	1,729	100	..	M	11	12	July	No	Req	47	$18	Nov
United Hospital	Port Chester	NPAssn	202	4,549	54	75	R	6	12	July	No	Req	28	$30(f)	Nov
Vassar Brothers Hospital	Poughkeepsie	NPAssn	250	5,171	42	..	R	5	12	July	No	Req	16	$30(i)	Fall
Genesee Hospital ✦	Rochester	NPAssn	244	5,722	29	99	R	4	24	July	(70)	Req	49	No	Nov
Highland Hospital	Rochester	NPAssn	249	4,635	25	45	R	5	24	July	No	Req	32	$25	Nov
Rochester General Hospital ✦	Rochester	NPAssn	378	8,127	41	85	R	4	24	July	No	Req	61	$15	Nov
St. Mary's Hospital ✦	Rochester	Church	257	5,359	..	100	R	8	12	July	No	Req	31	$20	Dec
Strong Memorial and Rochester Municipal Hospitals [1✦]	Rochester	NP-Cy	665	14,494	75	100	M&S	26	12&24	July	No	Req	73	No	Oct
Ellis Hospital [1]	Schenectady	NPAssn	439	8,379	18	20	R	7	12	July	No	Op	34	$15	Dec
U. S. Marine Hospital [3] (Staten Island)	Stapleton	USPHS	1,024	8,329	100	..	R	12	12	July	(71)	Req	57	$62.50	Dec
St. Vincent's Hospital	Staten Island	Church	241	5,067	66	100	R	4	24	July	No	Req	34	No	Nov
Staten Island Hospital	Staten Island	Corp	292	4,659	..	..	R	4	24	July	No	Req	24	$15	Nov
Crouse-Irving Hospital	Syracuse	NPAssn	240	6,291	32	..	R	4	12	July	No	None	34	$25	Nov
General Hospital [1]	Syracuse	NPAssn	110	2,927	32	..	R	4	12	July	No	Req	35	$10	Feb
Hospital of the Good Shepherd [1✦]	Syracuse	NPAssn	210	4,946	42	58	R	12	24	July	(72)	Req	30	$25	Nov
St. Joseph Hospital	Syracuse	Church	240	6,430	33	25	R	4	24	July	No	None	17	No	Nov
Syracuse Memorial Hospital ✦	Syracuse	NPAssn	250	6,269	37	..	R	12	24	July	(72)	None	47	No	Nov
Samaritan Hospital	Troy	NPAssn	193	3,521	19	95	R	4	12	JulySept	No	Req	51	$25	FallSpr
Troy Hospital	Troy	Church	294	4,145	..	100	R	7	12	July	(59)	Req	23	$30	Nov
Grasslands Hospital [1-3✦]	Valhalla	County	825	5,336	100	..	R	12	18	JanJuly	No	Req	64	$10-20	Nov
St. Agnes Hospital	White Plains	Church	177	3,419	32	68	R	5	12	July	No	Req	47	$40	July
White Plains Hospital	White Plains	NPAssn	203	3,752	35	..	R	5	12	JanJuly	No	Req	54	$50	MayNov
St. John's Riverside Hospital	Yonkers	NPAssn	260	4,628	..	100	R	6	12	(u)	No	Op	31	$50	July
St. Joseph's Hospital	Yonkers	Church	197	3,067	61	39	R	5	18	JanJuly	No	Req	31	$25	Dec
NORTH CAROLINA															
Charlotte Memorial Hospital	Charlotte	NPAssn	315	4,393	11	100	R	8	12	July	No	Req	46	$10	Nov
Duke Hospital [1-3✦]	Durham	NPAssn	503	11,800	71	80	S	52	12	JulySept	No	Req	60	No	NovDec
Lincoln Hospital	Durham	NPAssn	103	1,792	66	50	R	4	12	July	No	Req	23	$25	Nov
Watts Hospital ✦	Durham	NPAssn	225	4,977	25	100	R	7	12	July	No	Req	40	$15	Feb
Rex Hospital [1]	Raleigh	NPAssn	200	4,900	30	90	R	5	12	July	No	Req	21	$25	Oct
James Walker Memorial Hospital	Wilmington	NPAssn	197	3,753	40	50	R	6	12	July	No	Req	34	$25(f)	Nov
City Hospital [3✦]	Winston-Salem	City	355	8,729	35	95	R	12	12	July	No	Req	33	$15(h)	Nov
NORTH DAKOTA															
Trinity Hospital ✦	Minot	Church	174	3,526	..	100	R	4	12	July	No	None	79	$25	Sept
OHIO															
City Hospital ✦	Akron	NPAssn	368	12,663	19	19	R	15	12	July	(73)	Req	36	$22	Nov
Peoples Hospital [1]	Akron	NPAssn	191	4,347	20	100	R	7	12	July	(73)	Req	19	$15	Jan
St. Thomas Hospital [1✦]	Akron	Church	175	5,930	11	..	R	3	12	July	No	None	32	$20	Nov
Aultman Hospital	Canton	NPAssn	161	3,961	..	..	R	4	12	July	(74)	None	33	$50	Nov
Mercy Hospital [1✦]	Canton	Church	235	6,695	10	100	R	5	12	July	No	None	35	$25	Nov

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Name of Hospital	Location	Control	Capacity	Total Patients Treated	% Service Cases	% Priv. Pts. Worked Up by Interns	Type of Internship	Interns Appointed Annually	Length of Service in Months	Service Commences	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Appointments Made
OHIO—Continued															
Bethesda Hospital [1]	Cincinnati	Church	239	5,672	25	55	R	7	12	July	No	Req 24		$25(1)	Dec
Christ Hospital ✦	Cincinnati	Church	378	8,408	18	95	R	12	12	June	(75)	Req 40		$22.50	Nov
Cincinnati General Hospital [1-3]✦	Cincinnati	City	965	16,248	100	..	R	40	12	July	(70)	Req 51		No	Nov
Deaconess Hospital ✦	Cincinnati	Church	175	4,383	10	100	R	6	12	July	(77)	None 27		$25	Dec
Good Samaritan Hospital ✦	Cincinnati	Church	575	12,123	35	100	R&S	12	12&24	June	No	Req 32		$15-25	Nov
Jewish Hospital [1]✦	Cincinnati	NPAssn	300	5,762	15	100	R	8	12	July	(78)	Op 30		$20	Dec
St. Mary's Hospital	Cincinnati	Church	224	4,494	55	15	R	6	12	July	No	None 30		$25	Nov
City Hospital [1-3]✦	Cleveland	City	1,562	12,632	100	..	R	36	12	July	No	Req 44		No	Nov
Fairview Park Hospital	Cleveland	Church	187	3,737	13	100	R	4	12	July	No	Req 33		$30	Dec
Lutheran Hospital	Cleveland	Church	137	3,671	3	100	R	4	12	July	No	None 26		$45(1)	Nov
Mount Sinai Hospital [1-3]✦	Cleveland	NPAssn	270	8,044	23	100	R	6	24	July	No	Req 35		$10(h)	Nov
St. Alexis Hospital ✦	Cleveland	Church	220	5,908	30	100	R	8	12	July	(79)	Req 37		$10	Nov
St. John's Hospital ✦	Cleveland	Church	226	7,164	14	..	R	7	12	July	No	None 55		$22.50(v)	Nov
St. Luke's Hospital [3]✦	Cleveland	Church	391	10,074	23	77	R&S	10	24	June	No	Req 42		(w)	Nov
St. Vincent Charity Hospital ✦	Cleveland	Church	295	7,190	23	100	R	12	12	July	(79)	Req 36		No	Nov
University Hospitals [1-3]✦	Cleveland	NPAssn	885	18,902	44	100	R&S	25	12-24	Feb-June-Oct	No	Req 66		(x)	Nov
Woman's Hospital [1]	Cleveland	NPAssn	100	3,049	4	90	R	3	12	July	No	None 39		$25	Dec
Mount Carmel Hospital [1]	Columbus	Church	225	5,804	4	..	R	3	12	July	(80)	None 28		$25	Jan
St. Francis Hospital ✦	Columbus	State	160	2,818	80	100	R	8	12	July	(81)	None 45		$125yr	Nov
Starling-Loving University Hospital [1]✦	Columbus	State	296	6,491	71	..	S	12	12	July	(82)	Req 62		$40yr	Oct
White Cross Hospital ✦	Columbus	Church	299	7,092	15	65	R	6	12	July	No	None 41		$25	Dec
Good Samaritan Hospital [1]	Dayton	Church	275	6,099	40	20	R	4	12	July	No	None 25		$25	Dec
Miami Valley Hospital ✦	Dayton	NPAssn	400	10,317	77	..	R	9	12	July	(83)	None 33		$25	Nov
St. Elizabeth Hospital [1]	Dayton	Church	365	7,659	45	55	R	6	12	July	No	None 27		$25	Nov
Huron Road Hospital [1]✦	East Cleveland	NPAssn	327	8,045	5	100	R	10	12	July	No	Req 43		$20	Nov
Mercy Hospital	Hamilton	Church	200	6,547	..	100	R	3	12	July	No	Req 32		$65	Nov
Lima Memorial Hospital	Lima	NPAssn	145	3,376	3	100	R	4	12	July	No	None 33		$50	Varies
St. Rita's Hospital	Lima	Church	116	2,815	4	100	R	3	12	July	No	None 30		$65	Feb
Springfield City Hospital	Springfield	City	298	5,058	29	100	R	8	12	July	No	Req 31		$30	Nov
Flower Hospital	Toledo	Church	166	3,218	5	63	R	3	12	July	No	None 26		$25	March
Lucas County General Hospital ✦	Toledo	County	325	4,884	160	..	R	12	12	July	No	Req 46		$25	Nov
Mercy Hospital [1]	Toledo	Church	145	3,247	..	65	R	3	12	July	No	None 31		$35	Varies
St. Vincent's Hospital [1]✦	Toledo	Church	354	7,956	17	83	R	10	12	July	No	Req 33		$25	Nov
Toledo Hospital	Toledo	NPAssn	320	5,893	8	..	R	8	12	July	No	Req 41		$25	Jan
Women's and Children's Hospital	Toledo	NPAssn	142	2,491	6	100	R	3	12	July	No	None 31		$25	Nov
St. Elizabeth's Hospital ✦	Youngstown	Church	285	8,731	10	..	R	6	12	July	No	Req 24		$30(l)	Oct
Youngstown Hospital [3]✦	Youngstown	NPAssn	515	12,203	15	100	R	8	24	July	No	Req 32		(y)	Nov
OKLAHOMA															
St. Anthony Hospital ✦	Oklahoma City	Church	400	10,471	17	82	R	10	12	July	No	None 19		$25	Nov
University Hospitals [3]✦	Oklahoma City	State	466	5,420	98	..	R	11	24	July	(84)	Req 56		$10-25	Nov
Wesley Hospital	Oklahoma City	Part	160	4,369	10	90	R	3	12	July	No	None 30		$25	July
St. John's Hospital	Tulsa	Church	250	7,104	30	40	R	6	12	July-Oct	No	None 22		$25	Varies
OREGON															
Emanuel Hospital [1]✦	Portland	Church	328	7,562	3	98	R	11	12	June	(86)	None 49		$20	Nov
Good Samaritan Hospital	Portland	Church	346	8,462	5	90	R	10	12	July	No	None 44		$20	Nov
Portland Sanitarium and Hospital	Portland	Church	147	4,364	..	100	R	4	12	July	No	None 34		$30	Oct
St. Vincent's Hospital ✦	Portland	Church	422	9,349			R	10	12	June	No	None 50		$25	Nov
University of Oregon Medical School Hospitals and Clinic [3]✦	Portland	CoState	465	8,819	100	..	R	9	24	July	No	Op 58		$20	Nov
PENNSYLVANIA															
Abington Memorial Hospital ✦	Abington	NPAssn	330	6,311	54	95	R	6	24	July	No	Req 56		No	Nov
Allentown Hospital [1-3]	Allentown	NPAssn	410	8,103	68	100	R	10	12	July	No	Req 45		No	Sept
Sacred Heart Hospital	Allentown	Church	335	4,651	..	..	R	7	12	July	No	Req 35		$10	Jan
Altoona Hospital	Altoona	NPAssn	175	4,022	..	75	R	4	12	July	No	Req 30		$25	Jan
Mercy Hospital [1]	Altoona	NPAssn	180	3,031	48	100	R	5	12	July	No	Req 27		$25	Fall
St. Luke's Hospital [3]✦	Bethlehem	NPAssn	220	4,992	47	100	R	9	12	July	No	Req 26		$100yr	Varies
Braddock General Hospital	Braddock	NPAssn	147	3,051	28	..	R	4	12	July	No	Req 21		$25	Nov
Bryn Mawr Hospital	Bryn Mawr	Corp	264	4,625	31	100	R	8	12	July	No	Req 41		No	Nov
Chester Hospital [1-3]	Chester	NPAssn	250	5,333	48	100	R	6	12	July	No	Req 27		$15	Nov
George F. Geisinger Memorial Hospital [1]✦	Danville	NPAssn	174	5,094	42	100	R	10	12	July	No	Req 44		No	Dec
Fitzgerald-Mercy Hospital [1]	Darby	Church	248	4,414	43	100	R	8	12	July	No	Req 59		$25	Nov
Easton Hospital [2]	Easton	NPAssn	226	5,408	47	50	R	4	12	July	No	Req 25		(f)	Jan
Hamot Hospital	Erie	NPAssn	255	6,430	56	34	R	8	12	July	No	Req 31		$25	Jan
St. Vincent's Hospital	Erie	NPAssn	292	7,695	46	80	R	8	12	July	No	Req 30		$15	Nov
Harrisburg Hospital [1]	Harrisburg	NPAssn	264	6,037	46	75	R	10	12	July	No	Req 28		$15	Nov
Harrisburg Polyclinic Hospital	Harrisburg	NPAssn	180	3,743	..	98	R	4	12	July	No	Req 18		$25	Nov
Conemaugh Valley Memorial Hospital [1]	Johnstown	NPAssn	345	7,455	35	100	R	8	12	July	No	Op 22		$25	Nov
Nesbitt Memorial Hospital [1]	Kingston	NPAssn	142	2,523	20	30	R	3	12	July	No	Req 55		$25	Varies
Lancaster General Hospital [1]	Lancaster	NPAssn	281	5,739	..	100	R	8	12	July	No	Req 56		$17.50	Nov
St. Joseph's Hospital [1]	Lancaster	Church	230	4,202	42		R	6	12	July	No	Req 54		$17.50	Jan
McKeesport Hospital	McKeesport	NPAssn	325	5,496	27	100	R	7	12	July	No	Req 42		$25	Nov
Montgomery Hospital	Norristown	NPAssn	100	3,088	..	100	R	5	12	July	No	Req 23		$30	Varies
Chestnut Hill Hospital	Philadelphia	NPAssn	114	2,229		..	R	4	12	July	No	Req 53		$50	Nov
Frankford Hospital [1]	Philadelphia	NPAssn	192	3,723	84	15	R	7	12	July	No	Req 29		No	Nov
Germantown Dispensary and Hospital [3]✦	Philadelphia	NPAssn	411	6,720	60	100	R	6	24	July	No	Req 36		No	Nov
Graduate Hospital of the University of Pennsylvania ✦	Philadelphia	NPAssn	461	6,522	..	..	R	8	24	July	(87)	Req 50		No	Nov
Hahnemann Hospital [3]✦	Philadelphia	NPAssn	677	12,552	60	100	R	24	12	July	No	Req 49		No	Jan
Hosp. of the Protestant Episcopal Church [3]✦	Philadelphia	Church	530	6,834	..	..	R	8	24	Jan-July	No	Req 78		No	Nov
Hospital of the Univ. of Pennsylvania [1-3]✦	Philadelphia	NPAssn	338	10,380	1	75	R	14	24	July	No	Req 36		No	Nov
Hosp. of the Woman's Medical Coll-ge [2]	Philadelphia	NPAssn	173	3,295	..	100	R	6	12	July-Sept	No	Req 41		No	Oct
Jefferson Medical College Hospital [3]✦	Philadelphia	NPAssn	688	12,752	71	29	R	14	27	June	No	Req 44		No	Nov
Jewish Hospital [1-3]✦	Philadelphia	NPAssn	479	8,073	48	100	R	9	24	June	(88)	Req 60		No	Oct
Lankenau Hospital	Philadelphia	NPAssn	297	4,232	..	100	R	5	24	July	(89)	Req 35		No	Nov
Memorial Hospital [1-3]	Philadelphia	NPAssn	101	1,978	26	..	R	3	12	July	No	Req 33		$50	Nov
Mercy Hospital	Philadelphia	NPAssn	125	1,666	..	100	R	5	12	July	(90)	Req 24		$10	Nov
Methodist Hospital [1]	Philadelphia	Church	208	3,443	5	65	R	8	12	July	No	Req 28		No	Oct
Misericordia Hospital [1-3]	Philadelphia	Church	231	4,505	46	54	R	9	12	July	No	Req 43		No	Dec
Mount Sinai Hospital [1-3]✦	Philadelphia	NPAssn	317	6,802	48	100	R	7	24	June	No	Req 50		No	Nov
Northeastern Hospital [1-3]	Philadelphia	NPAssn	102	2,109	..	100	R	4	12	July	No	Req 43		$20	Jan
Pennsylvania Hospital [3]✦	Philadelphia	NPAssn	560	8,562	..	100	R	12	24	July-Sept-Nov	(91)	Req 60		No	Fall
Philadelphia General Hospital [1-3]✦	Philadelphia	City	2,736	26,034	100	..	R	30	24	July	(88)	Req 60		No	Jan
Presbyterian Hospital [1-3]	Philadelphia	Church	356	4,983	..	100	R	6	24	July	No	Req 82		No	Oct
St. Joseph's Hospital [1]	Philadelphia	Church	184	2,379	15	..	R	6	12	July	No	Req 38		$20	Jan
St. Luke's and Children's Medical Center	Philadelphia	NPAssn	259	4,920	65	100	R	8	12	July	No	Req 39		No	Nov
St. Mary's Hospital [1]	Philadelphia	Church	250	4,331	..	100	R	8	12	July	No	Req 35		No	Fall
Temple University Hospital [3]✦	Philadelphia	NPAssn	471	10,042	..	..	R	9	24	June	(92)	Req 69		No	Nov
United States Naval Hospital	Philadelphia	Navy	951	8,028	100	..	R	9	12	July	(93)	Op 40		(b)	July

Numerical and other references will be found on page 766.

Name of Hospital	Location	Control	Capacity	Total Patients Treated	% Service Cases	% Priv. Pts. Worked Up by Interns	Type of Internship	Interns Appointed Annually	Length of Service in Months	Service Commences	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Appointments Made
PENNSYLVANIA—Continued															
Woman's Hospital [2,3]✦	Philadelphia	NPAssn	166	2,715	..	100	R	6	12	July	(94)	Op	35	No	Oct
Women's Homeopathic Hospital [1]	Philadelphia	NPAssn	200	3,055	80	..	R	4	12	July	No	Req	31	$15	Varies
Allegheny General Hospital [1]✦	Pittsburgh	NPAssn	598	9,232	52	100	R	16	12	July	No	Req	34	No	Fall
Mercy Hospital [1]✦	Pittsburgh	Church	680	12,843	..	..	R	24	12	July	(95)	Req	37	(z)	Nov
Montefiore Hospital ✦	Pittsburgh	NPAssn	257	6,203	28	100	R	10	12	July	No	Req	44	No	Nov
Passavant Hospital [1]	Pittsburgh	Church	140	2,416	51	49	R	5	12	July	No	Req	33	$10	Nov
Pittsburgh Hospital [1]	Pittsburgh	NPAssn	210	3,849	91	..	R	6	12	July	No	Req	25	$25	Nov
Presbyterian Hospital [1]✦	Pittsburgh	NPAssn	150	3,205	34	99	R	20	12	July	(96)	Req	34	No	Sept
St. Francis Hospital [3]✦	Pittsburgh	Church	688	12,708	..	..	R	20	12	July	(97)	Req	21	No	Oct
St. John's General Hospital	Pittsburgh	NPAssn	225	4,479	48	52	R	5	12	July	No	Req	27	(j)	Nov
St. Joseph's Hospital and Dispensary	Pittsburgh	Church	140	2,386	..	100	R	4	12	July	No	Req	29	$25	Dec
Shadyside Hospital [3]	Pittsburgh	NPAssn	280	5,084	30	100	R	8	12	July	(97)	Req	30	No	Jan
South Side Hospital [1]	Pittsburgh	NPAssn	225	4,895	..	..	R	7	12	July	No	Req	17	$25	Jan
Western Pennsylvania Hospital [1,3]✦	Pittsburgh	NPAssn	661	10,290	87	..	R	18	12	July	No	Req	26	No	Nov
Pottsville Hospital [1]	Pottsville	NPAssn	172	2,984	58	100	R	5	12	July	No	Req	25	$25	Nov
Homeopathic Hospital	Reading	NPAssn	119	2,551	46	..	R	4	12	June	No	Req	25	$25	Nov
Reading Hospital [3]✦	Reading	NPAssn	325	5,672	41	100	R	10	12	July	No	Req	63	No	Dec
St. Joseph Hospital	Reading	Church	205	3,726	60	..	R	6	12	July	(98)	Req	32	$50	Nov
Robert Packer Hospital ✦	Sayre	NPAssn	325	7,094	81	..	R	10	12	July	No	Req	54	No	Oct
Moses Taylor Hospital	Scranton	NPAssn	120	2,107	..	100	R	3	12	July	(99)	Req	33	$25	Jan
Scranton State Hospital [1]	Scranton	State	315	3,869	95	..	R	8	12	July	No	Req	19	$25	Oct
Valley Hospital [1]	Sewickley	NPAssn	140	2,989	16	100	R	4	12	July	No	Req	29	$25	Jan
Uniontown Hospital	Uniontown	NPAssn	225	5,057	24	80	R	6	12	July	No	Req	29	$25	Jan
Washington Hospital	Washington	NPAssn	166	3,392	31	100	R	5	12	July	No	Req	38	$25	Oct
Chester County Hospital [3]	West Chester	NPAssn	168	2,138	62	38	R	4	12	July	No	Req	25	$25	Jan
Mercy Hospital [1,3]	Wilkes-Barre	Church	220	4,112	58	62	R	6	12	July	No	Req	20	$40yr	Nov
Wilkes-Barre General Hospital [1]	Wilkes-Barre	NPAssn	403	8,037	56	100	R	12	12	July	No	Req	29	No	Nov
Columbia Hospital [1]	Wilkinsburg	Church	217	3,844	63	100	R	5	12	July	No	Req	25	$20	Fall
Williamsport Hospital [1]	Williamsport	NPAssn	275	5,118	33	33	R	7	12	July	No	Req	19	$10	Dec
Windber Hospital [1]	Windber	NPAssn	117	2,760	..	100	R	4	12	July	No	Req	34	$25	Jan
York Hospital	York	NPAssn	219	4,939	..	..	R	8	12	July	No	Req	32	$25	Jan
RHODE ISLAND															
United States Naval Hospital	Newport	Navy	345	2,143	100	..	R	6	12-18	Varies	(100)	Req	36	(b)	Varies
Memorial Hospital	Pawtucket	NPAssn	196	3,455	59	41	R	3	24	July	No	Req	39	No	Nov
Homeopathic Hospital	Providence	NPAssn	196	4,907	33	8	M	5	12	July	No	Req	24	$50	Nov
Rhode Island Hospital [3]✦	Providence	NPAssn	486	8,721	83	67	R&S	14	12&24	Monthly	(101)	Req	62	No	Nov
St. Joseph's Hospital [3]	Providence	Church	350	5,634	41	46	R	4	24	JulyNov	No	Req	36	No	Nov
SOUTH CAROLINA															
Roper Hospital ✦	Charleston	NPAssn	355	8,358	70	100	R	12	12	July	No	Req	43	$5	Dec
United States Naval Hospital	Charleston	Navy	93	854	100	..	R	5	12	Varies	No	Req	50	(b)	Varies
Columbia Hospital [1]	Columbia	County	305	8,309	29	90	R	8	12	July	No	Req	23	$35(f)	Nov
Greenville General Hospital	Greenville	City	275	7,072	100	..	R	5	12	July	No	Req	21	$20	Dec
United States Naval Hospital	Parris Island	Navy	173	2,028	100	..	R	4	12	July	No	Req	25	(b)	Varies
TENNESSEE															
Baroness Erlanger Hospital [3]✦	Chattanooga	CyCo	510	9,246	50	50	R	20	12	July	(102)	Req	24	$25	Nov
Knoxville General Hospital [3]✦	Knoxville	City	325	8,724	80	100	R	9	18	Quarterly	No	Req	39	$25	Varies
Baptist Memorial Hospital	Memphis	Church	500	13,698	36	20	R	10	18	(p)	No	None	20	$25	MarNov
John Gaston Hospital [3]✦	Memphis	City	550	15,639	95	..	R&S	24	12&18	Monthly	No	Req	25	$20	Quarterly
Methodist Hospital ✦	Memphis	Church	302	7,428	30	..	R	6	12	Quarterly	No	None	33	$50	6moadv
St. Joseph Hospital	Memphis	Church	240	6,949	18	100	R	7	12	(g)	No	None	21	$35	Quarterly
George W. Hubbard Hospital [1]✦	Nashville	NPAssn	185	2,345	96	100	R	8	12	July	No	Req	25	$15	Nov
Nashville General Hospital [3]✦	Nashville	City	305	6,765	90	..	R	11	12	July	No	Req	43	$20	Dec
St. Thomas Hospital	Nashville	Church	204	5,607	..	100	R	7	12	July	No	None	23	$40	Sept
Vanderbilt University Hospital [1]✦	Nashville	NPAssn	391	6,295	60	40	S	21	12	July	(103)	Op	62	No	Nov
TEXAS															
Baylor University Hospital [3]✦	Dallas	Church	441	11,821	20	100	R	18	12	July	No	Req	31	$25	Nov
Methodist Hospital [1,3]	Dallas	Church	140	3,820	11	97	R	5	12	July	No	Req	32	$25(f)	Fall
Parkland Hospital [1,3]✦	Dallas	CyCo	380	9,639	97	100	R	12	12	JanJuly	No	Req	31	$10	Nov
St. Paul's Hospital	Dallas	Church	300	8,455	14	100	R	10	12	July	No	Req	19	$25	Oct
El Paso City-County Hospital [3]	El Paso	CyCo	212	3,885	100	..	R	4	12	July	No	Req	31	$25(h)	Nov
William Beaumont General Hospital	El Paso	Army	707	5,949	100	..	R	4	12	July	No	Op	76	$40	Jan
City and County Hospital [3]	Fort Worth	CyCo	188	5,375	100	..	R	8	12	July	No	Req	39	$25	Nov
Harris Memorial Methodist Hospital [1]	Fort Worth	Church	261	4,422	14	100	R	7	12	July	No	Req	72	$25(h)	Nov
St. Joseph's Hospital	Fort Worth	Church	200	4,995	18	100	R	5	12	July	No	None	19	$25(l)	Nov
John Sealy Hospital [1]✦	Galveston	State	421	7,707	72	50	R	12	12	July	No	Req	65	No	Dec
Hermann Hospital	Houston	NPAssn	200	4,568	70	100	R	3	24	July	No	Req	46	$20-30	Dec
Jefferson Davis Hospital [1,3]✦	Houston	CyCo	496	14,305	100	..	R	16	24	July	No	Req	28	$25-30	Nov
Medical and Surgical Memorial Hospital [1]	San Antonio	NPAssn	115	4,525	..	100	R	5	12	July	No	Req	20	$25	Nov
Nix Hospital [1]	San Antonio	Corp	169	5,314	..	100	R	4	12	July	(104)	None	48	$50	Varies
Robert B. Green Memorial Hospital [1,3]	San Antonio	County	218	5,027	100	..	R	13	12	July	No	Req	40	$10	Nov
Santa Rosa Hospital	San Antonio	Church	318	7,326	10	100	R	8	12	July	No	Req	23	$25	Nov
Station Hospital [3] (Fort Sam Houston)	San Antonio	Army	1,200	9,250	100	..	R	10	12	July	No	Req	86	$40	Jan
Kings Daughters Hospital	Temple	NPAssn	118	3,054	..	80	R	3	12	July	No	Req	24	$50	Nov
Scott and White Hospital [3]	Temple	Corp	175	3,609	..	100	R	8	12	July	(105)	Req	44	$25	Oct
UTAH															
Thomas D. Dee Memorial Hospital	Ogden	Church	224	6,666	80	20	R	6	12	July	No	Req	36	$25	Nov
Dr. W. H. Groves Latter-Day Saints Hosp.	Salt Lake City	Church	440	8,828	10	100	R	5	24	July	(106)	None	31	$15-20	Nov
Holy Cross Hospital [1]	Salt Lake City	Church	254	4,492	3	100	R	3	12	July	No	None	23	$25(j)	Nov
St. Mark's Hospital	Salt Lake City	Church	164	3,766	3	100	R	3	12	July	No	None	22	$25(f)	Nov
Salt Lake County General Hospital	Salt Lake City	County	258	4,066	100	..	R	4	24	July	No	Req	16	(k)	Nov
VERMONT															
Bishop DeGoesbriand Hospital [1,3]	Burlington	Church	135	3,692	38	30	R	3	12	July	No	None	41	$25	Nov
Mary Fletcher Hospital [3]✦	Burlington	NPAssn	150	5,708	66	100	R	5	12	JulySept	No	None	37	$25	Nov
VIRGINIA															
University of Virginia Hospital ✦	Charlottesville	State	411	8,818	100	..	S	19	12	July	(107)	Req	40	No	Nov
Hospital of St. Vincent de Paul	Norfolk	Church	250	4,952	35	65	R	6	12	July	No	Req	22	$25	Nov
Norfolk General Hospital ✦	Norfolk	NPAssn	272	8,009	26	100	R	8	12	JulyOct	(108)	Req	35	$25	Dec
United States Marine Hospital [3]	Norfolk	USPHS	360	3,869	100	..	R	8	12	July	(109)	Req	74	$62.50	Nov
Norfolk Naval Hospital	Portsmouth	Navy	1,090	9,227	100	..	R	6	12	July	No	Req	..	(b)	July
Johnston-Willis Hospital [1]	Richmond	Corp	142	5,317	..	75	R	3	12	July	No	Req	47	$15	Oct
Medical College of Virginia, Hosp. Div. [1,3]✦ (Memorial, Dooley and St. Philip Hospitals)	Richmond	State	512	10,142	82	18	R&S	25	12	July	(110)	Req	37	No	Nov
Stuart Circle Hospital	Richmond	Corp	112	2,891	..	100	R	3	12	July	No	None	38	$50(n)	Jan
Jefferson Hospital ✦	Roanoke	NPAssn	114	2,914	..	100	R	2	12	July	No	Req	67	$50	Dec
Lewis-Gale Hospital	Roanoke	NPAssn	134	3,479	..	100	R	3	12	July	No	Req	39	$50	Dec

Numerical and other references will be found on page 766.

Name of Hospital	Location	Control	Capacity	Total Patients Treated	% Service Cases	% Priv. Pts. Worked Up by Interns	Type of Internship	Interns Appointed Annually	Length of Service in Months	Service Commences	Affiliated Service	Outpatient Service	Autopsy Percentage	Stipend per Month	Appointments Made
WASHINGTON															
United States Naval Hospital	Bremerton	Navy	316	2,870	100	..	R	..	12	Varies	Yes	Req	40	(b)	Varies
Columbus Hospital [1]	Seattle	Church	230	3,429	18	100	R	4	12	July	(111)	Req	36	$30	Nov
King County Hospital Unit No. 1 [1,3]✦ (Harborview)	Seattle	County	505	13,109	100	..	R	12	24	July	No	Req	49	$30	Nov
Providence Hospital	Seattle	Church	400	10,375	..	..	R	8	12	July	(111)	None	20	$30	Dec
Seattle General Hospital	Seattle	NPAssn	125	3,536	..	..	R	3	12	July	(112)	None	28	$30	Jan
Swedish Hospital	Seattle	NPAssn	321	6,297	3	97	R	9	12	JulyOct	(113)	None	39	$30	Nov
United States Marine Hospital [3]	Seattle	USPHS	400	3,477	100	..	R	10	12	July	(114)	Req	73	$62.50	July
Virginia Mason Hospital	Seattle	NPAssn	167	4,511	..	100	R	4	12	June	No	Req	56	$30	Oct
Deaconess Hospital	Spokane	Church	221	5,489	..	..	R	4	12	July	(115)	None	21	$35	Nov
Sacred Heart Hospital	Spokane	Church	346	8,128	..	100	R	9	12	July	(115)	None	33	$35	Nov
St. Luke's Hospital	Spokane	NPAssn	180	3,554	..	..	R	4	12	July	(116)	None	27	$35	July
Pierce County Hospital	Tacoma	County	190	3,789	100	..	R	6	12	July	No	Req	35	$45	Nov
St. Joseph's Hospital	Tacoma	Church	329	5,294	..	..	R	4	12	July	No	None	57	$35	Oct
Tacoma General Hospital	Tacoma	NPAssn	220	5,813	..	..	R	4	12	July	No	None	49	$50	Fall
WEST VIRGINIA															
Charleston General Hospital [1]✦	Charleston	NPAssn	270	8,917	50	50	R	9	12	July	No	Req	38	$25	Nov
Kanawha Valley Hospital	Charleston	Corp	142	3,182	90	75	R	3	12	July	No	Req	47	$40	Nov
Chesapeake and Ohio Hospital	Huntington	NPAssn	130	2,807	..	100	R	3	12	July	No	Req	15	$37.50	Dec
St. Mary's Hospital	Huntington	Church	230	4,946	20	100	R	4	12	July	No	Req	19	$25	Nov
St. Joseph's Hospital	Parkersburg	Church	139	2,457	..	100	R	3	12	July	No	None	35	$50	Nov
Ohio Valley General Hospital [3]	Wheeling	NPAssn	275	7,246	9	100	R	9	12	July	No	Req	22	$25	Nov
Wheeling Hospital	Wheeling	Church	250	3,516	12	100	R	4	12	July	No	None	28	$40	March
WISCONSIN															
St. Elizabeth Hospital	Appleton	Church	210	4,138	..	80	R	3	12	July	No	None	33	$25	Nov
Luther Hospital	Eau Claire	NPAssn	155	3,834	..	85	R	4	12	July	No	None	49	$25(f)	Nov
St. Agnes Hospital	Fond du Lac	Church	233	5,150	..	..	R	4	12	July	No	None	19	$25	Varies
St. Francis Hospital	La Crosse	Church	292	5,106	..	100	R	4	12	July	No	Req	49	$20	Nov
Madison General Hospital [1]	Madison	NPAssn	203	5,633	..	100	R	6	12	July	No	None	51	$25	Nov
Methodist Hospital [1]	Madison	Church	124	2,174	..	100	R	3	18	Quarterly	No	Req	24	$30	Quarterly
St. Mary's Hospital	Madison	Church	225	5,156	..	..	R	5	12	June	No	None	36	$25	AugDec
State of Wisconsin General Hospital [1]✦	Madison	State	672	14,696	94	..	R	24	12	July	No	Req	75	No	Nov
St. Joseph's Hospital [1]	Marshfield	Church	198	3,399	..	85	R	3	12	JanJuly	No	None	21	$50	Oct
Columbia Hospital✦	Milwaukee	NPAssn	150	3,367	5	100	R	5	24	July	(117)	None	48	$25	Nov
Evangelical Deaconess Hospital [1]	Milwaukee	Church	168	4,494	1	90	R	5	12	June	(4)	None	22	$25	Nov
Milwaukee Hospital	Milwaukee	Church	272	7,408	15	100	R	8	12	July	No	Req	50	$25	Nov
Misericordia Hospital	Milwaukee	Church	154	2,764	7	..	R	4	12	July	No	None	19	$100	Dec
Mount Sinai Hospital	Milwaukee	NPAssn	190	5,570	11	100	R	6	12	July	No	Req	37	$25	Nov
St. Joseph's Hospital [1]✦	Milwaukee	Church	397	8,027	..	..	R	10	12	June	(118)	Req	31	$17	Nov
St. Luke's Hospital	Milwaukee	Church	130	4,030	..	100	R	2	12	July	No	Req	26	$50	Oct
St. Mary's Hospital✦	Milwaukee	Church	200	6,410	5	100	R	5	12	July	No	None	23	$25	Nov
Mercy Hospital [1]	Oshkosh	Church	224	3,247	..	..	R	4	12	July	No	None	37	$35	Varies
St. Mary's Hospital	Racine	Church	213	4,863	..	100	R	2	12	July	No	None	49	$25	Nov
St. Mary's Hospital [1]	Superior	Church	170	1,925	..	..	R	2	12	July	No	None	38	$25	Oct
Milwaukee County Hospital [1]✦	Wauwatosa	County	1,125	17,312	100	..	R	40	12	June	(119)	Req	38	$10	Nov
CANAL ZONE															
Gorgas Hospital	Ancon	Fed	1,388	20,964	100	..	R	13	12	July	No	Op	54	$65	Varies
HAWAII															
Queen's Hospital✦	Honolulu	NPAssn	320	10,380	..	..	R	6	24	Quarterly	(120)	None	73	$45-90	Jan
United States Naval Hospital	Pearl Harbor	Navy	178	3,589	100	..	R	4	12	Varies	No	Req	100	(b)	Varies
PHILIPPINES															
Philippine General Hospital [1]	Manila	Govt	895	20,622	91	..	R	126(aa)	12	March	(121)	Req	..	No	....
PUERTO RICO															
Bayamón Charity District Hospital	Bayamón	Govt	343	5,447	100	..	R	6	12	July	No	Req	42	$25	Jan
Fajardo Charity District Hospital [1]	Fajardo	Govt	343	1,481	100	..	R	6	12	July	No	Req	50	$25	Nov
Presbyterian Hospital [1]	San Juan	Church	142	2,091	51	80	R	4	12	July	No	Req	23	$10	JanJune

Numerical and other references will be found on page 766.

HOSPITALS APPROVED FOR INTERNSHIPS IN THE DOMINION OF CANADA

For the benefit of graduates of approved medical colleges who desire an internship in Canada, the Council on Medical Education and Hospitals of the American Medical Association has declared that hospitals which conform to the standards of the Department of Hospital Service of the Canadian Medical Association should be regarded as giving an internship equivalent in educational value to that offered by hospitals in the United States approved for intern training by the Council. It is understood, however, that this statement applies only to hospitals that are unqualifiedly "Approved" under the Canadian plan and does not apply to that group referred to as "Commended."

The following list of hospitals, revised to June 1, 1941, has been furnished by the Department of Hospital Service.

Name of Hospital	Location
Victoria General Hospital	Halifax, N. S.
St. John General Hospital	St. John, N. B.
Hospital du St. Sacrament	Quebec, Que.
Hotel Dieu de Quebec	Quebec, Que.
Hospital of the Infant Jesus	Quebec, Que.
Jeffrey Hale's Hospital	Quebec, Que.
Children's Memorial Hosp.	Montreal, Que.
Homoeopathic Hospital	Montreal, Que.
Hospital Notre Dame	Montreal, Que.
Hospital Ste. Justine	Montreal, Que.
Hotel Dieu of St. Joseph	Montreal, Que.
Hospital Ste. Luc	Montreal, Que.
Jewish General Hospital	Montreal, Que.
Montreal General Hospital	Montreal, Que.
Royal Victoria Hospital	Montreal, Que.
St. Mary's Hospital	Monteral, Que.
Woman's General Hospital, (Westmount)	Montreal, Que.
McKellar General Hospital	Fort William ,Ont.
Hamilton General Hospital	Hamilton, Ont.
St. Joseph's Hospital	Hamilton, Ont.
Ottawa Civic Hospital	Ottawa, Ont.
Ottawa General Hospital	Ottawa, Ont.
Kingston General Hospital	Kingston, Ont.
Hospital for Sick Children	Toronto, Ont.
Mount Sinai Hospital	Toronto, Ont.
St. Joseph's Hospital	Toronto, Ont.
St. Michael's Hospital	Toronto, Ont.
Toronto East General Hosp.	Toronto, Ont.
Toronto General Hospital	Toronto, Ont.
Toronto Western Hospital	Toronto, Ont.
Women's College Hospital	Toronto, Ont.
Brantford General Hospital	Brantford, Ont.
St Joseph's Hospital	London, Ont.
Victoria Hospital	London, Ont.
Metropolitan General Hosp.	Windsor, Ont.
Hotel Dieu of St. Joseph Hosp.	Windsor, Ont.
Children's Hospital	Winnipeg, Man.
Misericordia Hospital	Winnipeg, Man.
Winnipeg General Hospital	Winnipeg, Man.
St. Boniface Hospital	St. Boniface, Man.
Regina Grey Nuns' Hospital	Regina, Sask.
Regina General Hospital	Regina, Sask.
St. Paul's Hospital	Saskatoon, Sask.
Saskatoon City Hospital	Saskatoon, Sask.
Holy Cross Hospital	Calgary, Alta.
Edmonton General Hospital	Edmonton, Alta.
Misericordia Hospital	Edmonton, Alta.
Royal Alexandra Hospital	Edmonton, Alta.
University of Alberta Hosp.	Edmonton, Alta.
St. Paul's Hospital	Vancouver, B. C.
Vancouver General Hospital	Vancouver, B. C.
Royal Jubilee Hospital	Victoria, B. C.
St. Joseph's Hospital	Victoria, B. C.

NOTES

(a) In lieu of maintenance.
(b) Salary established by government pay tables.
(c) $30 per month second year.
(d) Bonus of $80.
(e) Bonus of $180.
(f) Bonus of $100.
(g) Every two months.
(h) Bonus of $120.
(i) Bonus of $60.
(j) Bonus of $300.
(k) $15 per month first year; $25 per month second year; bonus of $120 each year.
(m) Bonus of $150.
(n) Bonus of $50.
(o) Bonus of $75.
(p) Every six weeks.
(q) $10 per month second year.
(r) $15 per month second year.
(s) $25 per month first year; $50 per month second year; bonus of $100.
(t) February, June, July, October.
(u) May, June, July, October.
(v) Bonus of $30.
(w) $25 per month second year.
(x) $20 per month after 12 months.
(y) $15 per month first year; $30 per month second year; bonus of $60 each year.
(z) Bonus of $40.
(aa) All internships reserved for the fifth year students of the College of Medicine, University of the Philippines.

1. Women interns admitted.
2. Women interns only.
3. Dental interns employed.

Affiliation as Referred to in Column Headed: "Affiliated Service"

4. Children's Hospital, pediatrics.
5. California Babies Hospital, Georgia Receiving Hospital, Los Angeles, pediatrics, emergency.
6. Los Angeles Maternity Service.
7. Children's Hospital, Los Angeles Maternity Service.
8. Fairmont Hospital, San Leandro, and Arroyo-Del Valle Sanatorium, Livermore, medicine, surgery, tuberculosis.
9. Woman's Hospital, Pasadena, obstetrics.
10. Mercy Hospital, San Diego, obstetrics, gynecology, pediatrics.
11. Laguna Honda Home Infirmary, San Francisco, chronic diseases; Hassler Health Home, Redwood City, tuberculosis.
12. St. Francis Hospital, Stanford University Hospitals, San Francisco, obstetrics, pediatrics.
13. Franklin Hospital, San Francisco, obstetrics, gynecology, pediatrics.
14. Porter Sanitarium and Hospital, Denver, general.
15. Gallinger Municipal Hospital, Washington, pediatrics, tuberculosis, communicable diseases.
16. Gallinger Municipal Hospital, Children's Hospital, Washington obstetrics, pediatrics.
17. Grady Hospital, Atlanta.
18. Misericordia Hospital and Home for Infants, Chicago, obstetrics, pediatrics.
19. Municipal Contagious Disease Hospital, Chicago; Winfield Sanatorium, Winfield, tuberculosis.
20. Chicago Maternity Center, obstetrics, gynecology, pediatrics.
21. Rotation service established between Broadlawns and approved private hospitals.
22. Watkins Memorial Hospital, Lawrence, general.
23. Sedgwick County Hospital, Wichita.
24. Salvation Army Home and Hospital, Sedgwick County Hospital, Wichita, obstetrics, general.
25. Children's Free Hospital, Louisville City Hospital, pediatrics, obstetrics, gynecology.
26. Children's Free Hospital, Kosair Crippled Children Hospital, Louisville, pediatrics, orthopedics; Waverly Hills Sanatorium, Waverly Hills, tuberculosis.
27. Touro Infirmary, New Orleans, obstetrics, gynecology, pediatrics.
28. Shreveport Charity Hospital, obstetrics.
29. Annapolis Emergency Hospital, obstetrics, gynecology.
30. University Hospital, Sydenham Hospital, Baltimore, pediatrics, obstetrics, communicable diseases.
31. James Lawrence Kernan Hospital and Industrial School for Crippled Children, Baltimore.
32. Sydenham Hospital, Baltimore, communicable diseases.
33. Boston City Hospital, neurosurgery.
34. Children's Hospital, Boston, pediatrics.
35. Evangeline Booth Maternity Hospital and Home, Boston.
36. Norfolk County Hospital, South Braintree, tuberculosis.
37. Essex Sanatorium, Middleton, tuberculosis.
38. Wesson Maternity Hospital, Shriners Hospital for Crippled Children, Springfield, obstetrics, orthopedics.
39. Wesson Maternity Hospital, Health Department Hospital, Springfield, obstetrics, communicable diseases.
40. Herman Kiefer Hospital, Detroit.
41. Herman Kiefer Hospital, Children's Hospital, Detroit, communicable diseases, obstetrics, pediatrics.
42. Herman Kiefer Hospital, Detroit, communicable diseases; St. Joseph's Retreat, Dearborn, psychiatry.
43. Jackson County Sanatorium, tuberculosis; Jackson County Isolation Hospital, Jackson, communicable diseases.
44. Ingham Sanatorium, Lansing, tuberculosis.
45. Ingham Sanatorium, Boys' Vocational School Hospital, Lansing.
46. Oakland County Tuberculosis Sanatorium, Pontiac State Hospital, Pontiac, tuberculosis, psychiatry.
47. Miller Memorial Hospital, Duluth, outpatient service.
48. Gillette State Hospital for Crippled Children, St. Paul.
49. Children's Hospital, St. Paul, pediatrics.
50. Shriners Hospital for Crippled Children, City Isolation Hospital, St. Louis Children's Hospital, Barnard Free Skin and Cancer Hospital, St. Louis.
51. Jewish Sanatorium, Robertson, tuberculosis; City Isolation Hospital, St. Louis, communicable diseases.
52. Alexian Brothers Hospital, St. Louis, outpatient service.
53. Robert Koch Hospital, City Isolation Hospital, St. Louis, tuberculosis, communicable diseases.
54. St. Mary's Group of Hospitals includes the Firmin Desloge Hospital, St. Mary's Hospital and Mount St. Rose Sanatorium.
55. St. Elizabeth Hospital, Elizabeth, obstetrics, gynecology.
56. Margaret Hague Maternity Hospital, Jersey City.
57. New Jersey State Hospital, Marlboro, psychiatry; Allenwood Sanatorium, Allenwood, tuberculosis.
58. Fairview Sanatorium, New Lisbon, tuberculosis.
59. Anthony N. Brady Maternity Hospital, Albany.
60. Brooklyn Thoracic Hospital, tuberculosis.
61. Emergency Hospital of the Sisters of Charity, St. Mary's Infant Asylum and Maternity Hospital, Providence Retreat, Buffalo.
62. Millard Fillmore Hospital, Buffalo, surgery.
63. Edward J. Meyer Memorial Hospital, Buffalo, pediatrics, communicable diseases, psychiatry.
64. Chemung County Sanatorium, Elmira, tuberculosis.
65. Binghamton State Hospital, Binghamton, psychiatry.
66. Our Lady of Victory Infants' Home, Lackawanna, obstetrics, pediatrics.
67. Essex County Hospital for Contagious Diseases.
68. Jewish Maternity Hospital, New York City.
69. Bellevue Hospital, New York City, surgery.
70. Strong Memorial Hospital, Rochester, surgery.
71. Misericordia Hospital, New York City, obstetrics, pediatrics.
72. Rotation service established between Hospital of the Good Shepherd, Syracuse Memorial Hospital, City Hospital and Syracuse Psychopathic Hospital.
73. Children's Hospital, Akron, pediatrics.
74. Molly Stark Sanatorium, Canton, tuberculosis; Massillon State Hospital, Massillon, psychiatry.
75. Children's Hospital, Cincinnati, pediatrics.
76. Hamilton County Tuberculosis Sanatorium, Hamilton County Home and Chronic Disease Hospital, Cincinnati.
77. Longview State Hospital, Cincinnati, psychiatry.
78. Cincinnati General Hospital, pediatrics, otolaryngology.
79. St. Ann's Maternity Hospital, Cleveland.
80. Children's Hospital, Columbus, pediatrics.
81. St. Ann's Infant Asylum and Maternity Hospital, Children's Hospital, Columbus, obstetrics, pediatrics.
82. Children's Hospital, Columbus State Hospital, pediatrics, psychiatry.
83. Stillwater Sanatorium, Dayton, tuberculosis.
84. Western Oklahoma Tuberculosis Sanatorium, Clinton; Central Oklahoma State Hospital, Norman, psychiatry.
85. Haynes Memorial Hospital, Boston, communicable diseases.
86. Shriners Hospital for Crippled Children, Portland.
87. Hospital of the University of Pennsylvania, Philadelphia, obstetrics.
88. Philadelphia Hospital for Contagious Diseases.
89. Children's Hospital of the Mary J. Drexel Home, Philadelphia, pediatrics.
90. Henry Phipps Institute of the University of Pennsylvania, Philadelphia, tuberculosis.
91. Children's Hospital, Philadelphia, pediatrics.
92. Shriners Hospital for Crippled Children, Philadelphia Hospital for Contagious Diseases.
93. St. Vincent's Hospital for Women and Children, Philadelphia, obstetrics, gynecology, pediatrics.
94. Pennsylvania Hospital, Department for Mental and Nervous Diseases, Philadelphia.
95. Rosella Foundling and Maternity Hospital, Municipal Hospital for Contagious Diseases, Pittsburgh.
96. Elizabeth Steel Magee Hospital, Children's Hospital, Eye and Ear Hospital, Woman's Hospital, Pittsburgh.
97. Municipal Hospital for Contagious Diseases, Pittsburgh.
98. Berks County Tuberculosis Sanatorium, Reading.
99. Scranton State Hospital, obstetrics.
100. Union Hospital, Fall River, Mass., obstetrics, gynecology, pediatrics.
101. Providence Lying-In Hospital.
102. T. C. Thompson Children's Hospital, Pine Breeze Sanatorium, Chattanooga, pediatrics, tuberculosis.
103. Willard Parker Hospital, New York City, communicable diseases.
104. Salvation Army Women's Home, Mission Home, San Antonio, obstetrics.
105. Gulf, Colorado and Santa Fe Hospital, Temple, medicine and surgery.
106. Utah State Hospital, Provo, psychiatry.
107. Blue Ridge Sanatorium, Charlottesville, tuberculosis.
108. Henry A. Wise Hospital for Contagious Diseases, Norfolk.
109. Florence Crittenton Home, Children's Clinic of the Kings Daughters, Norfolk, obstetrics, pediatrics.
110. Pine Camp Hospital, Brook Hill, tuberculosis; Crippled Children's Hospital, Richmond.
111. King County Hospital, Seattle, outpatient service; Firland Sanatorium and Isolation Hospital, Richmond Highlands, tuberculosis.
112. Children's Orthopedic Hospital, Florence Crittenton Home, Seattle.
113. Children's Orthopedic Hospital, Seattle, pediatrics, orthopedics.
114. King County Hospital, Seattle, obstetrics, gynecology, pediatrics.
115. Edgecliff Sanatorium, Spokane, tuberculosis.
116. Edgecliff Sanatorium, Salvation Army Women's Hospital and Home, Spokane, tuberculosis, obstetrics.
117. Milwaukee Children's Hospital, South View Hospital, Milwaukee, pediatrics, communicable diseases; Sunny View Sanatorium, Winnebago, tuberculosis.
118. St. Michael Hospital, Milwaukee, general and outpatient service.
119. South View Hospital, Milwaukee, communicable diseases.
120. Kaulkeolani Children's Hospital, Honolulu.
121. Quezon Institute, Quezon, and San Lazaro Hospital, Manila.

APPROVED RESIDENCIES AND FELLOWSHIPS

Council on Medical Education and Hospitals of the American Medical Association,
535 North Dearborn Street, Chicago

Hospitals, 616; Residencies, 4,683; Fellowships, 550

The following institutions approved by the Council on Medical Education and Hospitals are considered in position to furnish acceptable training in various specialties as indicated below. Residencies in specialties, as defined by the Council, are straight services of one or more years following an approved internship. A fellowship is a form of apprenticeship which in some cases is indistinguishable from a residency, although it usually offers greater opportunity for the study of basic sciences and research. Ordinarily a fellowship is a university rather than a hospital appointment. Mixed residencies are general hospital assignments following internship. They include services classified as general residencies and chief residencies.

The star (*) indicates hospitals that are also approved for the training of interns. All hospitals on the approved intern list are likewise accredited for general or mixed residencies.

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1. ANESTHESIOLOGY

Revision of list is now taking place in collaboration with the American Board of Anesthesiology

		Chief of Service	Inpatients Treated[3]	Total Anesthetics	Inhalation Anesthetics	Autopsy Percentage	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Los Angeles County Hospital *[1]	Los Angeles	A. Guedell	48,902	12,468	4,350	57	3	0	0	7/1	1	$75
White Memorial Hospital *	Los Angeles	L. D. Lee	7,317	4,431	1,350	41	2	0	0	7/1	1-3	$80
Stanford University Hospitals *[1]	San Francisco	A. Dutton	9,736	4,064	2,084	53	1	1	0	7/1	1+	$25
Hartford Hospital *[1]	Hartford, Conn.	R. M. Tovell	17,514	12,601	7,587	57	11	0	0	1/1&7/1	2	$50
University Hospital *[1]	Augusta, Ga.	P. P. Volpitto	8,495	2,700	2,450	35	1	0	0	7/1	1	$25
Michael Reese Hospital *[1]	Chicago	E. Stein	17,600	12,500	11,500	60	5	0	0	1/1&7/1	1-2	$50
Research and Educational Hospital *[1]	Chicago	W. H. Cassels	5,475	2,096	2,072	86	3	0	0	7/1&9/1	1-3	$50
University of Chicago Clinics *[1]	Chicago	H. L. Adams	10,844	6,929	6,035	78	0	4	0	7/1	1-2	$100
Methodist Hospital *	Indianapolis	J. M. Whitehead	17,633	12,889	12,217	24	4	0	0	7/1	1-2	$75
University Hospitals *[1]	Iowa City	S. C. Cullen	18,551	8,602	4,850	55	1	4	0	7/1	1-6	$35
University of Kansas Hospitals *	Kansas City, Kan.	P. Lorhan	6,015	2,398	1,883	68	1	1	0	7/1	1-2	$50
Louisville City Hospital *	Louisville, Ky.	D. M. Dollar	12,422	4,820	2,619	24	1	1	0	7/1	1-2	$23
Boston City Hospital *[1]	Boston	W. A. Noonan	44,875	10,350	3,300	47	1	2	0	Varies	1+	$50
Lahey Clinic	Boston	U. H. Eversole	.....	7,500	3,500	..	0	0	5	1/1&7/1	1-2	$100[6]
Massachusetts General Hospital *[1-24]	Boston	H. K. Beecher	15,352	10,574	5,386	63	1	0	0	7/1	1	$42
Massachusetts Memorial Hospitals *[1]	Boston	E. B. Ferguson	6,935	3,756	1,944	76	1	1	0	7/1	2	$50
Harper Hospital *	Detroit	F. J. Murphy	.....	.....	.....	36	1	0	0	7/1	1	$25
University Hospitals *[1]	Minneapolis	R. Knight	8,785	4,474	2,862	79	0	0	3	7/1	3	$50
Mayo Foundation	Rochester, Minn.	(See page 788)										
West Jersey Homeopathic Hospital *	Camden, N. J.	H. S. Ruth	5,216	2,902	2,052	37	1	0	0	10/1	1-2	Varies
Jersey City Hospital *	Jersey City, N. J.	.....	18,841	9,306	3,477	18	1	4	0	1/1&7/1	1+	$75
Albany Hospital *	Albany, N. Y.	F. A. D. Alexander	11,610	5,288	4,470	73	3	1	0	7/1	1	$50
Bellevue Hospital *[1]	New York City	E. A. Rovenstine	67,892	16,462	11,901	33	3	8	0	1/1&7/1	2-3	$50
Flower and Fifth Avenue Hospitals *	New York City	D. E. Brace	7,763	5,069	4,717	26	2	0	0	7/1	1	$25
French Hospital *	New York City	S. H. Lesinger	5,893	2,300	1,934	36	1	0	0	7/1	1	$50
Lincoln Hospital *	New York City	.....	10,582	3,141	2,241	31	2	0	0	Varies	1+	$100
Metropolitan Hospital *[1]	New York City	D. E. Brace	12,050	2,691	2,382	34	3	0	0	7/1	1+	$100
New York Polyclinic Medical School and Hospital *	New York City	B. C. Sword	7,812	4,718	2,249	23	3	0	0	1/1, 7/1, 10/1	2	$100
New York Post-Graduate Medical School and Hospital *	New York City	M. C. Peterson	9,139	5,106	4,395	37	1	5	0	1/1&7/1	2	$50
Presbyterian Hospital *[1]	New York City	V. Apgar	18,017	9,527	8,692	49	5	0	0	1/1&7/1	1	$50
St. Luke's Hospital *	New York City	G. E. Burford	8,515	5,799	2,428	51	1	2	0	7/1	1½-3	$100
St. Vincent's Hospital *	New York City	G. H. Van Gilluwe	9,264	3,549	2,888	39	1	1	0	1/1&7/1	1	$75
Grasslands *	Valhalla, N. Y.	H. F. Bishop	3,596	1,598	877	64	0	1	0	7/1	1-2	$75
Huron Road Hospital *	East Cleveland, O.	R. J. Whitacre	8,045	6,442	3,678	43	1	1	0	7/1	1-2	$40
University Hospitals *[1]	Oklahoma City	H. E. Doudna	5,420	3,637	3,029	56	3	0	0	7/1	1	$50
University of Oregon Medical School Hospitals and Clinics *[1]	Portland	J. Hutton	8,819	5,758	1,871	58	1	1	0	7/1	2	$40
Hahnemann Hospital *	Philadelphia	J. M. Godfrey	12,552	7,022	4,413	49	2	0	0	9/1	1	$50
Presbyterian Hospital *	Philadelphia	J. P. North	4,983	4,020	3,288	82	1	0	0	7/1	1+	$50
Rhode Island Hospital *	Providence	M. Saklad	8,721	6,177	3,386	62	1	0	0	7/1	1	$50
State of Wisconsin General Hospital *[1]	Madison	R. M. Waters	14,096	6,859	4,203	75	3	6	0	7/1	3	$25
Columbia Hospital *	Milwaukee	.....	3,307	2,189	1,644	48	1	0	0	Varies	3	$50

2. CARDIOLOGY

		Chief of Service	Inpatients Treated[3]	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Indiana University Medical Center *[1]	Indianapolis	S. Bond	.....	.....	223	..	1	0	0	7/1	1-3	$83
House of the Good Samaritan	Boston	W. D. Smith	281	281	838	15	1	0	0	10/1	1+	$50
Henry Ford Hospital *	Detroit	F. J. Smith	819	.....	5,934	44	2	0	0	9/1	1-3	$130[6]
Pennsylvania Hospital *	Philadelphia	W. D. Stroud	.....	.....	4,421	3	1	0	0	7/1	1-3	$15
St. Francis Hospital *	Pittsburgh	A. P. D'Zmura	.....	397	10	14	1	0	0	9/1	1	$50
Rhode Island Hospital *	Providence	F. T. Fulton	.....	.....	947	..	1	0	0	7/1	1	$50

Numerical and other references will be found on page 788.

3. COMMUNICABLE DISEASES

		Chief of Service	Inpatients Treated[a]	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Los Angeles County Hospital *[1]	Los Angeles	P. Hamilton	2,595	2,595	.....	96	3	0	0	Varies	1+	$175
Hospital for Children *[2]	San Francisco	E. B. Shaw	242	68	.....	7	0	1	0	7/1	1	$25
Municipal Hospitals *	Hartford, Conn.	C. Thenebe	454	454	.....	5	1	0	0	7/1	1	$125
Cook County Hospital *[1]	Chicago	A. L. Hoyne	1,685	1,685	.....	43	1	0	0	1/1&7/1	½-1	$25
Municipal Contagious Disease Hospital [1]	Chicago	A. L. Hoyne	3,838	3,838	.....	65	12	0	0	1/1&7/1	½-1	$100
Sydenham Hospital	Baltimore	M. G. Tull	1,211	1,211	.....	26	1	1	0	7/1	1	$40
Boston City Hospital *[1]	Boston	E. H. Place	1,340	1,340	.....	10	2	0	0	Varies	1+	$150
Massachusetts Memorial Hospitals *	Boston	C. Wesselhoeft	1,151	1,151	.....	1	1	0	0	Varies	1+	None
Belmont Hospital [1]	Worcester, Mass.	W. MacDonald	516	516	.....	3	1	0	0	Varies	1-3	$133
Herman Kiefer Hospital	Detroit	D. C. Young	2,960	2,619	.....	33	3	0	0	7/1	1-3	$150
Kansas City General Hospital *	Kansas City, Mo.	C. Ferris	388	388	.....	13	1	0	0	7/1	1	$80
City Isolation Hospital [1]	St. Louis	R. W. Maxwell	1,081	1,081	.....	27	1	1	0	7/1	1+	$75
Essex County Hospital for Contagious Diseases [1]	Belleville, N. J.	E. L. Smith	4,244	4,244	.....	22	7	0	0	1/1&7/1	½-1	$50
Kingston Avenue Hospital [1]	Brooklyn	M. B. Gordon	3,691	3,691	.....	31	6	0	0	1/1&7/1	1	$100
Queens General Hospital *[1]	Jamaica, N. Y.	H. A. Reisman	814	814	.....	5	1	0	0	7/1	1	$100
Willard Parker Hospital [1]	New York City	B. W. Hamilton	6,879	6,879	.....	23	7	0	0	1/1&7/1	1	$100
City Hospital *	Cleveland	H. J. Gerstenberger	2,018	2,018	1,505	32	1	1	0	1/1&7/1	1-3	$40
Philadelphia Hospital for Contagious Diseases [1]	Philadelphia	P. F. Luecheso	3,532	3,532	.....	28	1	0	0	7/1	½-1	$25

4. DERMATOLOGY AND SYPHILOLOGY

The following services are approved by the Council and the American Board of Dermatology and Syphilology:
(See footnotes 32 and 33)

		Chief of Service	Inpatients Treated[a]	Service Cases	Outpatient Visits	Autopsies	Senior Residents	Assistant Residents	Service Begins	Length of Service	Beginning Stipend	Fellowships	Graduate Students
Los Angeles County Hospital *[1,32]	Los Angeles	T. Nisbet	562	562	39,711	4	3	0	7/1	3	$10	0	..
University of California Hospital *[1,33]	San Francisco	W. J. Kerr	30	27	9,041	..	1	1	7/1	1+	$25	0	..
Georgetown University Hospital *[32]	Washington, D. C.	F. Eichenlaub	46	21	8,506	..	0	0	7/1	3	$75	1	..
Research and Educational Hospital *[33]	Chicago	F. E. Senear	47	47	.....	3	3	0	7/1	1-3	$50	..	..
University of Chicago Clinics *[33]	Chicago	S. W. Becker	....	....	14,829	5	1	1	1/1&7/1	1-3	None	2	2
University Hospitals *[1,32]	Iowa City	R. Nomland	305	305	2,615	2	1	1	7/1	1-3	$21	0	..
Massachusetts General Hospital *[33]	Boston	C. G. Lane	360	....	54,945	7	1	1	7/1	3	None	1	..
University Hospital *[1,32]	Ann Arbor, Mich.	U. Wile	775	775	9,835	4	2	2	7/1	1-3	$25	0	4
City of Detroit Receiving Hospital *[1,10,34]	Detroit	Robt. C. Jamieson	288	288	869[c]	..	0	0	7/1	2-3	$75[d]	2	..
Minneapolis General Hospital *[1,33]	Minneapolis	S. Sweitzer	367	367	21,642	1	0	0	1/1&7/1	3	$25	2	..
University Hospitals *[1,32]	Minneapolis	H. E. Michelson	182	....	10,439	7	0	0	7/1	3	$50	1	..
Mayo Foundation [33]	Rochester, Minn.	(See page 788)											
Barnard Free Skin and Cancer Hospital [32]	St. Louis	M. F. Engman	69	69	14,995	0	1	0	7/1	1-3	$25	0	..
Edward J. Meyer Memorial Hospital *[33]	Buffalo	E. D. Osborne	413	413	34,373	3	1	2	7/1	3-4	$50[e]	0	..
Bellevue Hospital *[1,33]	New York City	H. Fox	1,544	1,544	46,049	18	1	2	1/1&7/1	1	$18	0	2
Columbia Presbyterian Medical Center *[33]	New York City	J. G. Hopkins	31	....	50,378	2	0	0	Varies	1-3	....	1	..
New York Post-Graduate Medical School and Hospital *[33]	New York City	G. M. MacKee	295	164	114,543	1	1	2	1/1&7/1	2	None	0	20
Duke Hospital *[1,33]	Durham, N. C.	J. L. Callaway	97	75	8,628	1	1	0	7/1	1	None	0	..
Cincinnati General Hospital *[33]	Cincinnati	E. B. Tauber	464	464	29,976	5	1	2	7/1	1-2	[e]	0	..
City Hospital *[33]	Cleveland	H. N. Cole	412	412	28,348	6	1	1	7/1	1-3	$40	0	..
University Hospitals *[33]	Cleveland	H. N. Cole	198	124	28,693	3	1	1	7/1	2	$25	0	..
University of Oregon Medical School Hospitals and Clinics *[32]	Portland	L. B. Kingery	92	92	24,653	..	1	2	7/1	3	$40	0	..
Graduate Hospital of the University of Pennsylvania *[1,33]	Philadelphia	F. D. Weidman	50	50	24,813	0	0	0	6/1	1-3	None	1	10
Hosp. of the University of Pennsylvania *[3]	Philadelphia	J. H. Stokes	198	....	25,265	0	0	0	7/1	2-5	$42	6	..
Jefferson Medical College Hospital *[32]	Philadelphia	F. C. Knowles	122	....	20,735	0	0	0	7/1	1	$50	1	..
University of Virginia Hospital *[32]	Charlottesville	D. C. Smith	571	571	17,383	6	1	1	7/1	1	$50	0	1

The following services, approved by the Council, are now being reviewed in collaboration with the American Board of Dermatology and Syphilology:

Boston City Hospital *[1]	Boston	W. P. Boardman	199	199	41,420	8	1	0	Varies	1+	$100	0	2
Kings County Hospital *	Brooklyn	A. Potter	721	721	34,351	3	1	0	10/1	1	$100	0	..
Metropolitan Hospital *[1]	New York City	V. A. H. Cornell	384	384	18,073	1	1	0	7/1	1+	$18	0	..
Montefiore Hospital for Chronic Diseases *[1]	New York City	F. Wise	22	10	469	1	1	0	7/1	1	$50	1	..
New York City Hospital *	New York City	A. B. Cannon	800	800	18,036	5	1	0	7/1	1	$100	0	..
Skin and Cancer Hospital	Philadelphia	A. Strickler	176	176	54,493	..	1	0	9/1	1	$30	0	..
Pittsburgh Skin and Cancer Foundation	Pittsburgh	L. Hollander	....	....	45,352	..	2	0	7/1	3	$150[c]	0	..

5. EPILEPSY

		Chief of Service	Inpatients Treated[a]	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Monson State Hospital	Palmer, Mass.	M. B. Hodskins	1,552	87	.....	35	1	0	0	7/1	1	None

6. FRACTURES

Denver General Hospital *[14]	Denver	H. W. Wilcox	381	381	4,567	46	1	0	0	7/1	1-2	$50
City of Detroit Receiving Hosp.tal * [1,10]	Detroit	A. D. LaFerte	1,014	1,014	12,178	1	1	1	0	7/1	2	$75[d]
Presbyterian Hospital *[1]	New York City	W. Darrach	485	423	14,154	..	1	1	0	1/1&7/1	1	$30
Rhode Island Hospital *	Providence	M. S. Danforth	497	.....	7,979	2	1	0	0	7/1	1	$50

7. GYNECOLOGY

The following services accredited by the Council are fully approved by the American Board of Obstetrics and Gynecology:

Free Hospital for Women	Brookline, Mass.	F. A. Pemberton	2,635	2,631	17,382	10	2	3	0	Varies	1	None
Jersey City Hospital *	Jersey City, N. J.	....	810	684	3,094	3	1	1	0	7/1	1	$75
Albany Hospital *	Albany, N. Y.	A. J. Wallingford	2,156	385	1,272	11	1	1	0	7/1	1	$25
Buffalo General Hospital *	Buffalo	F. C. Goldsborough	1,561	551	3,914	16	1	0	0	7/1	1-2	$25
Harlem Hospital * [1]	New York City	H. C. Falk	1,493	1,493	26,621	3	1	1	0	1/1&7/1	1	$18
Mount Sinai Hospital *[1,10]	New York City	....	....	....	21,159	..	1	1	1	1/1&7/1	1	$50
University Hospitals *[1]	Cleveland	W. H. Weir	1,341	639	9,188	6	1	3	0	7/1	2	$25
Graduate Hospital of the University of Pennsylvania *	Philadelphia	W. R. Nicholson	565	565	3,203	2	1	0	0	7/1	1	None
Elizabeth Steel Magee Hospital	Pittsburgh	B. Z. Cashman	1,616	600	2,202	15	1	1	0	9/1	5	$33

Numerical and other references will be found on page 788.

7. GYNECOLOGY—(Continued)

The following services, approved by the Council, are now being reviewed in collaboration with the American Board of Obstetrics and Gynecology:

		Chief of Service	Inpatients Treated's	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Hospital for Children *[2]	San Francisco	H. Stephenson	313	25	932	0	0	1	0	7/1	1	$25
Passavant Memorial Hospital *[1]	Chicago	A. H. Curtis	69/	165	4,211	6	1	0	0	7/1	1	None
Indiana University Medical Center *[1]	Indianapolis	C. Habich	781	781	2,859	4	1	0	0	7/1	1	$33
Touro Infirmary *	New Orleans	C. Tyrone	1,163	.....	4,659	4	1	0	0	7/1	1-2	$25
Johns Hopkins Hospital *	Baltimore	R. W. TeLinde	2,054	1,244	13,675	12	1	4	0	7/1&9/1	1-6	None
University Hospital *[1]	Baltimore	J. M. Hundley, Jr.	781	.....	7,299	3	1	2	0	7/1	1-4	None
New York Polyclinic Medical School and Hospital *	New York City		842	.....	3,816	1	1	0	0	7/1	2	None
New York Post-Graduate Medical School and Hospital *	New York City	W. T. Dannreuther	557	209	28,950	2	1	0	0	10/1	1	$90
Syracuse Memorial Hospital *	Syracuse, N. Y.	N. P. Sears	720	284	1,911	1	1	0	0	7/1	1	None
Starling-Loving University Hospital *[1]	Columbus, O.	F. Fletcher	456	...	3,285	1	1	1	0	7/1	1-2	$25
Woman's Hospital *[2]	Philadelphia		382	.....	2,041	1	1	0	0	9/1	1	$25
St. Francis Hospital *	Pittsburgh	B. Z. Cashman and W. A. Nealon	870	.....	1,189	6	1	0	0	9/1	1-2	$65
John Gaston Hospital *	Memphis, Tenn.	W. L. Williamson	897	.....	11,959	7	1	0	0	7/1	1	$65

8. MALIGNANT DISEASES

Albert Steiner Clinic for Cancer and Allied Diseases	Atlanta, Ga.	R. H. Fike	2,977	2,977	46,847	31	2	0	0	7/1	1	$75
Michael Reese Hospital *[1,28]	Chicago	E. Uhlmann	1,377	.....	.....	..	1	0	0	7/1	1-3	$25
Collis P. Huntington Memorial Hospital	Boston	C. C. Simmons	1,491	1,491	13,987	9	1	1	1	7/1	1	$125
New England Deaconess Hospital [3]	Boston	L. S. McKittrick	1,233	.....	7,016	63	2	0	0	1/1&7/1	1+	$83
Westfield State Sanatorium [1]	Westfield, Mass.	C. Binnig	755	755	6,351	64	2	0	0	Varies	1+	$150
Pondville Hospital at Norfolk	Wrentham, Mass.	E. M. Daland	1,627	.....	7,078	101	9	0	0	Varies	1-1¼	$150
Eloise Hospital and Infirmary *[1]	Eloise, Mich.		468	468	625	138	1	0	0	7/1	1	$67
Barnard Free Skin and Cancer Hospital	St. Louis	F. J. Taussig and W. E. Leighton	1,135	1,135	27,504	14	2	0	1	7/1	1	$25
Jersey City Hospital *	Jersey City, N. J.		614	553	4,825	17	1	0	0	7/1	1+	$75
Brooklyn Cancer Institute	Brooklyn	W. E. Howes	1,038	1,038	8,764	53	6	0	0	3/1, 7/1, 11/1	1	$75
Meadowbrook Hospital *	Hempstead, N. Y.	A. C. Martin	447	447	3,943	35	1	0	0	7/1	1	$75
Memorial Hospital for the Treatment of Cancer and Allied Diseases	New York City	C. P. Rhoads	4,210	.....	54,067	99	4	12	13	1/1&7/1	1-2	$15
New York City Cancer Institute Hospital [1]	New York City	M. Lenz	980	980	9,418	65	8	0	0	1/1&7/1	1	$50
Duke Hospital *[1]	Durham, N. C.	R. Jones	1,381	921	1,769	56	1	1	0	7/1	3	None
American Oncologic Hospital	Philadelphia	G. M. Do.rance	556	532	7,237	22	4	0	1	7/1	1-3	$100
Jeanes Hospital [1]	Philadelphia	R. W. Teahan	620	620	7,551	33	2	0	0	7/1	1-3	$50

9. MEDICINE

Revision of list is now taking place in collaboration with the American Board of Internal Medicine and the American College of Physicians

Hillman Hospital *	Birmingham, Ala.	J. S. McLester and H. R. Carter	2,467	2,467	21,746	79	2	0	0	7/1	1	$50
Employees' Hospital of the Tennessee Coal, Iron and Railroad Company *	Fairfield, Ala.	G. F. Walsh	1,985	1,985	16,606	44	2	0	0	7/1	1	$150
Baptist State Hospital *	Little Rock, Ark.	J. N. Compton	1,805	164	.....	20	1	0	0	7/1	1	$100
General Hospital of Fresno County *	Fresno, Calif.	W. E. Schottstaedt	2,508	2,508	33,389	132	1	0	0	7/1	1	$65
Cedars of Lebanon Hospital *	Los Angeles		2,011	575	20,241	53	1	0	0	7/1	1-2	$75
Los Angeles County Hospital *[1]	Los Angeles	E. R. Ware	8,048	8,048	64,052	794	18	0	0	7/1	3	$10
White Memorial Hospital *	Los Angeles	W. E. Macpherson	1,401	.....	27,187	34	2	0	0	7/1	1-3	$80
Highland-Alameda County Hospital *[1]	Oakland, Calif.	R. T. Sutherland and H. G. McLean	2,088	2,038	.....	226	1	2	0	7/1	1-3	$40
Collis P. and Howard Huntington Memorial Hospital *	Pasadena, Calif.	W. J. Stone	480	76	6,441	51	1	0	0	7/1	1	$100
San Diego County General Hospital *	San Diego, Calif.	C. L. Stealy	6,511	6,511	20,329	132	2	0	0	7/1	1	$115
Hospital for Children *[2]	San Francisco	D. Atkinson	605	129	3,181	..	0	1	0	7/1	1	$25
Mount Zion Hospital *	San Francisco	L. H. Briggs	2,222	326	13,701	61	1	2	0	6/15	1-2	$50
St. Luke's Hospital *	San Francisco	H. P. Hill	1,802	1,802	3,783	55	1	2	0	7/1	1	$75
San Francisco Hospital *[1]	San Francisco	L. H. Briggs and G. D. Barnett	3,405	3,405	.....	..	6	0	0	7/1	1	$50
Stanford University Hospitals *[1]	San Francisco	A. Bloomfield	2,047	949	23,210	58	1	6	0	7/1	1-2	$25
University of California Hospital *[1]	San Francisco	W. J. Kerr	1,549	949	30,553	58	1	5	0	8/1	1+	$25
Santa Clara County Hospital *	San Jose, Calif.	G. Gray	2,304	2,304	26,949	125	1	0	0	7/1	1	$75
Fairmont Hospital of Alameda County [1]	San Leandro, Calif.	R. T. Sutherland and H. G. MacLean	2,086	2,086	.....	150	1	2	0	7/1	1	$40
Colorado General Hospital *[13]	Denver	J. J. Waring	852	852	25,827	87	1	1	0	8/1	2	$40
Denver General Hospital *	Denver	M. Katzman	1,515	1,515	1,633	108	2	0	0	7/1	1-2	$50
Grace Hospital *	New Haven, Conn.	S. J. Goldberg	1,601	417	2,866	44	1	0	0	7/1	3	$90
New Haven Hospital *[1]	New Haven, Conn.	F. G. Blake	2,473	.....	19,000	151	1	4	0	1/1&7/1	1+	*
Central Dispensary and Emergency Hosp.*	Washington, D. C.	H. M. Kaufman	1,322	.....	6,503	56	1	1	0	6/15	1-3	$50
Freedmen's Hospital *	Washington, D. C.	J. L. Hall	1,045	786	29,804	48	1	2	0	7/1&10/1	1-2	$10
Gallinger Municipal Hospital *[1]	Washington, D. C.	W. M. Yater	2,792	2,792	1,150	160	2	8	0	7/1	1	$25
Garfield Memorial Hospital *	Washington, D. C.	J. B. Glenn	2,218	985	1,835	90	1	1	0	7/1	1-2	$50
Georgetown University Hospital *	Washington, D. C.	W. M. Yater	1,137	444	11,963	55	0	0	6	7/1	3	$75
Duval County Hospital *	Jacksonville, Fla.	L. Limbaugh	899	899	.....	105	1	2	0	7/1	1	$30
James M. Jackson Memorial Hospital *	Miami, Fla.		4,151	.....	15,700	97	1	1	0	7/1	1	$75
Grady Hospital *	Atlanta, Ga.		3,117	3,117	62,305	254	2	2	0	7/1	1+	$20
St. Joseph Infirmary *[1]	Atlanta, Ga.	J. Hines	1,075	480	680	10	1	0	0	7/1	1-3	$75
University Hospital *[1]	Augusta, Ga.	V. P. Sydenstricker	1,892	.....	3,869	51	1	2	0	7/1	1-2	$40
Emory University Hospital *	Emory University, Ga.	C. W. Strickler	1,589	486	.....	51	0	1	0	7/1	1-2	$50
Cook County Hospital *[1]	Chicago	C. C. Maher	20,417	20,417	32,493	564	27	0	2	1/1&7/1	1-3	$25
Mercy Hospital-Loyola University Clinics *.	Chicago	I. F. Volini	1,377	107	24,873	34	1	0	0	7/1	1-2	$50
Michael Reese Hospital *[1]	Chicago	W. Brams	2,607	708	2,696	88	2	0	0	1/1&7/1	1-2	$50
Mount Sinai Hospital *[1]	Chicago		1,494	378	20,842	60	1	0	0	7/1	1	$30
Norwegian-American Hospital *[1]	Chicago	D. E. Markson	1,353	22	.....	41	1	0	0	7/1	1	$35
Passavant Memorial Hospital *[1]	Chicago	W. H. Holmes	1,656	226	36,979	47	3	0	3	1/1&7/1	1	None
Presbyterian Hospital *	Chicago		3,606	162	.....	51	3	0	0	7/1	1-3	$50
Provident Hospital *[1]	Chicago	A. F. Connor	939	.....	31,210	18	1	0	1	7/1	1-3	$50
Research and Educational Hospital *	Chicago	R. W. Keeton	457	457	.....	41	3	0	0	7/1	1-3	$50
St. Luke's Hospital *	Chicago	A. R. Elliott	2,560	384	13,585	75	1	2	0	7/1	1-3	$25
University of Chicago Clinics *[1]	Chicago	G. F. Dick	2,275	2,275	37,963	87	1	4	13	7/1	1-3	None
Wesley Memorial Hospital *[1]	Chicago	A. A. Goldsmith	531	.....	.....	17	1	0	1	7/1	1-2	$35
Evanston Hospital *	Evanston, Ill.	L. D. Snorf	2,319	.....	11,784	73	1	0	0	7/1	1	$50
St. Francis Hospital *	Evanston, Ill.	R. W. Keeton	4,171	85	.....	82	1	0	0	7/1	1	$42
Indianapolis City Hospital *[1]	Indianapolis	C. J. Clark	2,311	2,311	39,061	196	3	0	5	7/1	1-3	$42
Indiana University Medical Center *[1]	Indianapolis	J. O. Ritchey	1,636	1,636	5,865	74	2	3	0	7/1	1-3	$63
University Hospitals *[1]	Iowa City	F. M. Smith	2,114	2,008	3,400	68	1	3	0	7/1	1-6	$21

Numerical and other references will be found on page 788.

9. MEDICINE—(Continued)

		Chief of Service	Inpatients Treated	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
University of Kansas Hospitals *	Kansas City, Kan.	R. H. Major	1,698	.....	11,269	65	1	2	0	7/1	1-3	$50
Louisville City Hospital *[1]	Louisville, Ky.	J. W. Moore	2,095	2,095	49,375	94	2	8	0	7/1	1-3	$14
Charity Hospital *[1]	New Orleans		11,141	11,141	90,178	544	15	8	0	7/1	1-4	$25
Touro Infirmary *	New Orleans	R. Lyons	1,800	.....	24,393	68	3	0	0	7/1	1	$25
Baltimore City Hospitals *	Baltimore	J. T. King, Jr.	3,128	3,128	.....	276	1	5	0	7/1	1	$12
Church Home and Infirmary *[1]	Baltimore	Z. R. Morgan	622	187	921	22	1	0	0	7/1	1	$25
Hospital for Women *[1]	Baltimore	w. Baetjer	425	114	2,349	4	1	1	0	7/1	1	$50
Johns Hopkins Hosp.tal *[1]	Baltimore	W. T. Longcope	4,345	1,804	96,458	173	1	6	0	7/1&9/1	1-8	None
Maryland General Hospital *	Baltimore	E. B. Freeman	942	196	1,405	28	1	3	0	7/1	1-2	$25
Mercy Hospital *	Baltimore	M. C. Pincoffs	1,416	.....	2,780	59	1	3	0	7/1	2	$25
Provident Hospital and Free Dispensary *	Baltimore	E. B. Jarrett	387	230	577	10	1	1	0	10/15	1-2	$25
St. Agnes Hospital	Baltimore	T. O'Hara	800	344	1,907	13	1	0	0	7/1	1-2	None
St. Joseph's Hospital *	Baltimore	R. Hussey	900	.....	4,190	30	1	2	0	7/1	2-3	$10
Sinai Hospital *	Baltimore	C. R. Austrian	1,439	370	13,907	55	1	2	0	7/1	1	$50
South Baltimore General Hospital *	Baltimore	G. McLean	545	.....	3,774	28	1	1	0	7/1	1-2	$25
Union Memorial Hospital *	Baltimore	W. Baetjer	1,593	.....	4,497	42	1	4	0	7/1	1-4	$40
University Hospital *	Baltimore	M. C. Pincoffs	1,559	.....	7,360	61	1	4	0	7/1	1-4	None
West Baltimore General Hospital *	Baltimore	L. Krause	697	183	886	22	2	0	0	7/1	2	$20
Beth Israel Hospital *	Boston	H. Linenthal	1,916	900	11,179	69	1	0	0	7/1	1-2	$70
Boston City Hospital *[1]	Boston	G. R. Minot	11,882	11,882	42,308	681	6	8	10	Varies	1+	a
Joseph H. Pratt Diagnostic Hospital	Boston	J. H. Pratt	1,550	955	.....	10	5	0	0	7/1	1-2	$12
Lahey Clinic	Boston	I. M. Hurxthal and F. N. Allen	3,000	3,000	30,000	..	0	0	16[8]	1/1&7/1	1-2	$100[8]
Massachusetts General Hospital *[1,31]	Boston	J. H. Means	4,043	.....	72,901	93	1	5	0	9/1	1-3	$42
Massachusetts Memorial Hospitals *	Boston	C. S. Keefer	1,186	.....	4,732	39	1	4	0	7/1	3	.....
Peter Bent Brigham Hospital *	Boston	S. Weiss	2,304	.....	41,147	141	1	6	0	1/1&7/1	1-3	$42
Worcester City Hospital *	Worcester, Mass.	R. W. Schofield	2,608	.....	11,023	103	1	0	0	1/1	1	$75
University Hospital *[1]	Ann Arbor, Mich.	C. C. Sturgis	3,455	.....	15,500	121	7	8	0	7/1	1-3	$25
Alexander Blain Hospital	Detroit	R. L. Kinsey	394	.....	.....	8	1	0	0	7/1	1-2	$75
City of Detroit Receiving Hospital *[1,31]	Detroit	G. B. Myers	3,446	3,446	14,698	340	1	6	1	7/1	1-2	$75[8]
Grace Hospital *	Detroit	G. B. Hoops	3,047	914	10,519	97	1	1	0	7/1&9/1	2	$50
Harper Hospital *	Detroit	H. A. Freund	2,792	270	.....	..	1	6	0	7/1	1-3	$25
Henry Ford Hospital *	Detroit	F. J. Sladen	4,467	.....	75,815	95	12	14	2	9/1	1-5	$130[8]
Providence Hospital *	Detroit	H. Schmidt	1,455	.....	.....	119	1	0	0	7/1	1	$100
Eloise Hospital and Infirmary *	Eloise, Mich.	M. R. McQuiggan	2,710	.....	64,034	187	5	6	2	7/1	1-5	$50
Hurley Hospital *	Flint, Mich.	M. S. Chambers	1,950	83	.....	67	1	0	0	7/1	1	$42
Butterworth Hospital *	Grand Rapids, Mich.	A. J. Baker	1,241	169	.....	58	1	0	0	7/1	1	$40
Minneapolis General Hospital *[1]	Minneapolis	G. Fahr	2,698	2,698	25,384	185	0	0	6	1/1&7/1	1-3	$25
University Hospitals *[1]	Minneapolis	C. J. Watson	1,209	.....	29,629	68	0	0	6	7/1	3	$50
Mayo Foundation	Rochester, Minn.	(See page 788)										
Ancker Hospital *	St. Paul, Minn.	A. R. Hall and A. Hoff	1,932	1,932	25,029	201	6	0	0	7/1	1	$50
St. Louis County Hospital *	Clayton, Mo.	H. S. Liggett	1,091	1,091	28,218	69	1	1	0	7/1	1-2	$50
Kansas City General Hospital *	Kansas City, Mo.	L. Bell	2,419	2,419	20,295	250	3	0	0	7/1	2	$50
St. Joseph Hospital *	Kansas City, Mo.	H. L. Jones	1,358	.....	.....	77	1	0	0	7/1	1-3	$50
St. Mary's Hospital *	Kansas City, Mo.	P. F. Stookey	1,098	426	.....	71	1	0	0	7/1	1	$50
Barnes Hospital *	St. Louis	D. P. Barr	3,855	.....	24,504	119	1	3	1	7/1	1-3	$25
De Paul Hospital *	St. Louis	E. P. Buddy	1,496	.....	961	38	1	1	0	7/1	1-2	$50
Homer G. Phillips Hosp.tal *[1]	St. Louis	L. Gottlieb	2,136	2,136	21,213	92	3	2	0	7/1	1-3	$75
Jewish Hospital *	St. Louis	L. Sale	2,620	582	10,868	52	1	2	0	7/1	1+	$35
St. Louis City Hospital *	St. Louis	T. Findley	3,722	3,722	24,030	302	3	6	0	7/1	1-2	$50
St. Luke's Hospital *	St. Louis	A. B. Day	1,024	.....	6,650	34	0	1	0	7/1	1	$50
St. Mary's Group of Hospitals *	St. Louis	J. Kinsella	2,767	1,121	52,761	123	0	0	6	7/1	1-3	$25
Creighton Memorial St. Joseph's Hospital *	Omaha	A. Sachs	1,463	315	193	36	..	..	..	7/1	1-2	$45
Jersey City Hospital *	Jersey City, N. J.		4,867	4,393	10,329	109	1	2	0	1/1&7/1	1+	$75
Albany Hospital *	Albany, N. Y.	L. W. Gorham	1,106	670	6,504	95	1	1	1	7/1	1	$25
Coney Island Hospital	Brooklyn	I. S. Nash	1,463	1,463	35,975	54	1	0	0	7/1	1	$100
Cumberland Hospital *	Brooklyn	H. Joachim	1,353	1,353	55,838	69	1	1	0	1/1&7/1	1	$18
Jewish Hospital *[1]	Brooklyn	S. R. Blatteis	1,782	1,176	21,518	84	2	0	0	7/1	1	$25
Kings County Hospital *	Brooklyn	J. Crawford and H. Moses	17,300	17,300	100,495	470	4	4	0	1/1&7/1	1-2	$18
Long Island College Hospital *[1]	Brooklyn	T. Howard	1,468	907	20,951	61	1	2	0	7/1	3-4	$25
Norwegian Lutheran Deaconesses' Home and Hospital *[1]	Brooklyn	B. A. Fedde and H. Gissel	610	.....	421	..	1	0	0	7/1	1	None
Buffalo General Hospital *[1]	Buffalo	A. H. Aaron	2,438	1,071	3,247	121	1	7	0	7/1	1-2	$75
Edward J. Meyer Memorial Hospital *	Buffalo	D. K. Miller	2,437	2,437	33,495	142	2	6	0	7/1	3-6	$50[8]
Millard Fillmore Hospital *	Buffalo	J. H. Mesmer	1,083	150	2,315	25	1	0	0	7/1	1	$25
Mary Imogene Bassett Hospital *	Cooperstown, N. Y.	G. M. Mackenzie	.....	.....	.....	..	1	0	0	7/1	1	$125
Meadowbrook Hospital *	Hempstead, N. Y.	E. C. Jessup	2,234	2,234	.....	152	1	0	0	7/1	1	$50
Queens General Hospital *[1]	Jamaica, N. Y.	A. W. Victor	2,284	2,284	37,719	211	1	1	0	7/1	1	$18
Charles S. Wilson Memorial Hospital *	Johnson City, N. Y.	E. M. Jones	1,136	.....	.....	54	..	..	..	..	..	.....
New Rochelle Hospital *	New Rochelle, N. Y.	C. Read	1,235	.....	1,553	49	1	0	0	7/1	1-2	$50
Bellevue Hospital *[1]	New York City		10,847	10,847	110,767	377	4	0	0	1/1&7/1	1	$33
Flower and Fifth Avenue Hospitals *	New York City	L. J. Boyd	1,060	335	5,083	18	1	0	0	7/1	1	$25
Metropolitan Hospital *[1]	New York City	L. J. Boyd	3,415	3,415	46,672	153	2	0	0	7/1	1+	$100
Montefiore Hospital for Chronic Diseases *[1]	New York City	L. Lichtwitz	491	147	3,402	75	1	3	1	1/1	1	$70
Mount Sinai Hospital *[1,19,22]	New York City		.....	.....	92,986	..	1	1	0	1/1&7/1	1	$50
New York City Hospital *	New York City	J. Carroll and W. L. Whittemore	2,991	2,991	24,510	172	2	0	0	7/1	1	$15
New York Hospital *	New York City	E. F. Du Bois	1,448	1,448	60,902	80	1	8	0	7/1	1-5	$25
New York Infirmary for Women and Children *[2]	New York City	M. Manter	391	250	9,447	7	1	0	0	7/1	1	$15
New York Polyclinic Medical School and Hospital *	New York City		900	.....	10,618	14	1	0	0	7/1	2	None
New York Post-Graduate Medical School and Hospital *	New York City	I. S. Wright	1,823	482	55,665	35	1	1	0	7/1	1	$10
Presbyterian Hospital *[1]	New York City	W. W. Palmer	4,011	1,799	69,638	..	1	3	0	7/1	1	$42
Welfare Hospital for Chronic Diseases *[1]	New York City		1,836	1,836	47	126	7	11	0	7/1	1+	$18
Genesee Hospital *	Rochester, N. Y.	D. B. Jewett	1,141	410	5,579	25	1	0	0	7/1	1	$75
Rochester General Hospital *	Rochester, N. Y.	C. P. Thomas	1,516	790	5,331	66	1	1	0	7/1	1	$25
Strong Memorial and Rochester Municipal Hospitals *	Rochester, N. Y.	W. S. McCann	3,408	2,550	27,005	234	3	5	0	7/1	1-4	$42
Hospital of the Good Shepherd *	Syracuse, N. Y.	E. C. Reifenstein, Sr.	1,198	747	.....	52	1	1	0	7/1	1	$42
Grasslands Hospital *	Valhalla, N. Y.	M. D. Touart	894	894	6,549	133	1	1	0	7/1	1-2	$75
Duke Hospital *[1]	Durham, N. C.	F. M. Hanes	4,120	1,927	28,726	77	1	1	20	7/1	2-5	None
Watts Hospital *	Durham, N. C.	W. R. Stanford	1,280	294	4,674	26	0	1	0	7/1	1	$25
City Hospital *	Winston-Salem, N. C.	S. F. Pfohl	1,767	665	5,348	64	2	0	0	7/1	1-2	$50
Trinity Hospital *	Minot, N. D.	P. H. Rowe	1,015	.....	.....	64	1	0	0	7/1	3	$50
City Hospital *	Akron, O.		1,960	.....	8,216	84	1	0	0	7/1	2	$55
Mercy Hospital *	Canton, O.	J. D. O'Brien	1,821	229	.....	49	1	0	0	7/1	1	$65
Christ Hospital *	Cincinnati	J. L. Tuechter	1,914	244	3,173	46	2	0	0	6/25	1	$75

Numerical and other references will be found on page 788.

9. MEDICINE—(Continued)

		Chief of Service	Inpatients Treated[2]	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Cincinnati General Hospital *[1]	Cincinnati	M. A. Blankenhorn	2,537	2,537	40,551	271	1	13	8	7/1	1-3+	[a]
Deaconess Hospital *	Cincinnati	F. C. Theiss	2,534	144	.....	37	1	0	0	7/1	1	$75
Good Samaritan Hospital *	Cincinnati	G. Topmoeller	4,432	1,558	566	116	2	0	0	7/1	1	$35
Jewish Hospital *[1,15]	Cincinnati	W. Stix	2,163	568	.....	44	2	0	0	7/1	1-2	$45
City Hospital *	Cleveland	R. W. Scott	2,364	2,364	37,931	239	2	10	0	7/1	1-3	$40
Cleveland Clinic Foundation Hospital	Cleveland	R. L. Haden	2,363	.....	.....	21	0	0	16	7/1	1-3	$55
Mount Sinai Hospital *[1]	Cleveland	S. S. Berger	1,887	377	22,432	52	1	0	0	7/1	1	$60
St. Alexis Hospital *	Cleveland	H. V. Paryzek	1,917	310	11,162	25	1	0	0	7/1	1	$65
St. John's Hospital *	Cleveland	C. E. Steyer	1,385	.....	.....	32	1	0	0	7/1	1-2	$50
St. Luke's Hospital *	Cleveland	C. T. Way	2,424	444	4,440	76	1	1	0	6/25	2	$50
St. Vincent Charity Hospital *	Cleveland	F. C. Oldenburg	2,051	.....	17,026	67	1	0	0	7/1	1-2	$50
University Hospitals *[1]	Cleveland	T. T. Wears	4,156	1,393	32,651	179	1	11	4	7/1	2	$25
St. Francis Hospital *	Columbus, O.	L. H. Van Buskirk	771	617	.....	74	1	0	0	7/1	1-2	$25
Starling-Loving University Hospital *[1]	Columbus, O.	C. A. Doan	1,106	.....	23,502	62	2	1	1	7/1	1-4	$25
Miami Valley Hospital *	Dayton, O.	W. Bryant	2,876	563	.....	97	1	0	0	7/1	1+	$75
Huron Road Hospital *[1]	East Cleveland, O.	A. B. Schneider	1,107	65	4,456	49	2	0	0	7/1	1-2	$40
Lucas County General Hospital *	Toledo, O.	N. Morris	1,842	.....	34,239	128	1	0	0	7/1	1	$75
St. Vincent's Hospital *	Toledo, O.	C. W. Waggoner	1,671	316	15,260	77	1	0	0	7/1	1-3	$100
St. Elizabeth's Hospital *	Youngstown, O.	A. M. Rosenblum	1,959	.....	859	59	1	0	0	7/1	1	$75
Youngstown Hospital *	Youngstown, O.	W. H. Bunn	2,992	318	1,000	74	1	0	0	7/1	1	$50
St. Anthony Hospital *	Oklahoma City	P. M. McNeill	1,581	149	.....	40	1	0	0	7/1	1	$50
University Hospitals *	Oklahoma City	G. A. Lamotte	848	790	14,428	45	1	1	0	7/1	1-2	$50
University of Oregon Medical School Hospitals and Clinics *	Portland, Ore.	L. Selling	2,820	2,820	28,315	184	1	2	0	7/1	3	$40
Abington Memorial Hospital *	Abington, Pa.	G. M. Piersol	1,507	.....	1,786	65	1	0	0	7/1	1	$25
George F. Geisinger Memorial Hospital *	Danville, Pa.	W. J. Stainsby	1,608	.....	6,052	56	1	0	0	9/1	1	$40
Germantown Dispensary and Hospital *	Philadelphia		1,532	1,144	17,514	46	1	0	0	8/1	1-3	$130
Graduate Hospital of the University of Pennsylvania *	Philadelphia	G. M. Piersol	1,104	1,104	20,513	55	1	0	0	7/1	1	None
Hahnemann Hospital *	Philadelphia	G. H. Wells	1,453	.....	12,192	80	0	1	0	9/1	2	$50
Hospital of the University of Pennsylvania *	Philadelphia	O. H. P. Pepper	1,969	.....	23,057	66	1	0	5	7/1	1+	None
Jefferson Medical College Hospital *[12]	Philadelphia	H. A. Reimann and H. K. Mohler	2,433	.....	37,554	130	1	0	2	9/1	1	$50
Jewish Hospital *[1]	Philadelphia	E. A. Heller	1,830	.....	5,214	129	1	0	0	6/15	1-2	None
Mount Sinai Hospital *[1]	Philadelphia	A. I. Rubenstone and A. Trasoff	1,576	883	16,079	31	1	1	0	7/15	2-3	$25
Pennsylvania Hospital *	Philadelphia	D. L. Farley and G. G. Duncan	1,502	1,245	10,041	113	2	0	0	7/1&9/1	1-3	$30
Presbyterian Hospital *	Philadelphia		.....	1,028	3,374	113	1	0	0	7/1	1-2	None
Temple University Hospital *[1]	Philadelphia	C. L. Brown	1,423	1,423	8,457	46	3	0	0	9/1	3	$40
Woman's Hospital *[2]	Philadelphia		617	.....	3,601	11	1	0	0	9/1	1	$25
Allegheny General Hospital *	Pittsburgh	E. W. Willetts	1,591	802	12,601	76	1	0	0	9/1	1	$85
Elizabeth Steel Magee Hospital	Pittsburgh	J. D. Heard	1,274	570	630	30	1	1	0	9/1	2	$83
Mercy Hospital *	Pittsburgh	W. G. Maciachlan	2,627	.....	.....	55	1	0	2	9/1	1	$112
St. Francis Hospital *	Pittsburgh	A. W. Sherrill and F. B. Utley	1,582	.....	2,496	53	1	1	0	9/1	1-2	$85
Reading Hospital *	Reading, Pa.	W. S. Bertolet	853	345	1,436	109	1	0	0	9/1	1	$83
Robert Packer Hospital *	Sayre, Pa.	S. D. Conklin	2,027	1,982	3,790	58	0	0	2	9/1	1	$50
Roper Hospital *	Charleston, S. C.	R. Wilson	1,992	1,894	18,523	76	1	2	1	7/1	1-3	$10
John Gaston Hospital *	Memphis, Tenn.	C. H. Sanford	3,017	.....	21,612	102	1	2	0	7/1	1	$33
George W. Hubbard Hospital of Meharry Medical College *[1]	Nashville, Tenn.	E. L. Turner	548	.....	5,281	24	1	0	0	7/1	2	$75
Nashville General Hospital *	Nashville, Tenn.	O. N. Bryan	1,767	1,313	15,900	89	1	3	0	7/1	1-2	$35
Vanderbilt University Hospital *[1]	Nashville, Tenn.	H. J. Morgan	1,782	807	42,569	77	1	4	0	7/1	1+	$35
Baylor University Hospital *	Dallas, Tex.	H. M. Winans	2,769	288	5,591	37	1	1	1	7/1	1-2	$38
Parkland Hospital *[1]	Dallas, Tex.	W. G. Reddick	2,039	.....	16,533	49	4	0	0	1/1&7/1	2	$25
John Sealy Hospital *[1]	Galveston, Tex.	C. T. Stone	1,639	.....	15,749	20	1	3	0	7/1	1-3	$25
Jefferson Davis Hospital *[1]	Houston, Tex.	A. L. Miller	2,274	2,274	17,427	117	1	0	0	7/1	1	$50
Mary Fletcher Hospital *	Burlington, Vt.	C. H. Beecher	844	.....	.....	23	1	0	0	7/1	1	$150
University of Virginia Hospital *	Charlottesville	E. M. Landis	2,383	.....	7,208	53	1	1	0	7/1	1	$50
Chesapeake and Ohio Hospital	Clifton Forge, Va.	G. S. Hartley	1,040	.....	6,300	14	1	0	0	7/1	1-2	$50
Norfolk General Hospital *	Norfolk, Va.		2,503	.....	2,874	47	1	0	0	7/1	1-2	$50
Medical College of Virginia, Hospital Div. *	Richmond	W. B. Porter	2,280	.....	65,733	104	2	3	0	7/1	1	$25
King County Hospital *[13]	Seattle	C. E. Watts	2,208	2,208	95,904	210	1	0	0	7/1	1	$125
State of Wisconsin General Hospital *[1]	Madison	W. S. Middleton	3,975	.....	19,574	70	4	11	1	7/1	3	$25
Columbia Hospital *	Milwaukee	J. J. Pink	760	.....	.....	23	1	0	0	7/1	3-4	$25
St. Joseph's Hospital *	Milwaukee	F. D. Murphy	1,788	1,788	.....	45	1	0	0	6/15	1+	$40
Milwaukee County Hospital *[1]	Wauwatosa, Wis.	F. D. Murphy	5,399	5,399	48,861	227	4	6	0	7/1&7/15	1-3	$50
Queen's Hospital *	Honolulu, T. H.	N. P. Larsen	8,801	.....	..	1	1	0	0	1/1	1	$90

10. MIXED

(In addition to the hospitals listed below, all hospitals approved for intern training are likewise accredited for mixed residencies.)

Baptist Hospitals	Birmingham, Ala.	C. F. Lewis	5,823	317	210	48	4	0	0	7/1	1	$125
St. Vincent's Hospital	Birmingham, Ala.	U. J. W. Peters	4,011	93	.....	28	4	0	0	7/1	1	$75
St. Margaret's Hospital	Montgomery, Ala.	J. H. Blue	4,776	.....	.....	39	3	0	0	7/1	1	$75
St. Mary's Hospital and Sanatorium	Tucson, Ariz.	J. B. Littlefield and D. F. Hill	3,852	.....	.....	40	2	0	0	7/1	1	$150
Leo N. Levi Memorial Hospital	Hot Springs National Park, Ark.	D. C. Lee	1,332	1,332	21,578	13	2	0	0	7/1	1	$60
Paradise Valley Sanitarium and Hospital [1]	National City, Calif.	C. E. Nelson	1,985	1,341	12,374	21	1	0	0	11/1	1	$110
St. Joseph's Hospital [1]	San Francisco	R. H. Parkinson	6,017	81	.....	41	1	0	0	7/1	1-2	$75
Sonoma County Hospital [1]	Santa Rosa, Calif.	C. M. Fleissner	2,906	2,906	3,926	87	6	0	0	7/1	1	$100
St. Mary Hospital	Pueblo, Colo.	J. F. Snedec	2,673	.....	.....	45	1	0	0	7/1	1	$50
Doctors Hospital	Washington, D. C.	C. S. White	5,050	.....	50	65	4	5	0	7/1	1	$25
Riverside Hospital	Jacksonville, Fla.	T. Z. Cason	1,567	1,948	8,956	10	1	0	0	7/1	1	$50
St. Anthony's Hospital [1]	Rock Island, Ill.	E. F. Condon	2,320	325	1,404	50	1	0	0	7/1	1	...
Lafayette Home Hospital	Lafayette, Ind.	I. Cole	3,084	.....	.....	31	1	0	0	7/1	1	$85
St. Elizabeth Hospital	Lafayette, Ind.	R. A. Flack	4,750	238	.....	44	4	0	0	7/1	1	$75
St. Luke's Methodist Hospital	Cedar Rapids, Ia.	E. H. Files	4,384	.....	.....	57	1	0	0	7/1	1	$125
Bethany Hospital [1]	Kansas City, Kan.	W. H. Algie	3,201	.....	.....	52	2	0	0	7/1	1	$100
Jewish Hospital	Louisville, Ky.	J. W. Helm	1,775	133	.....	13	2	0	0	7/1	1	$50
Flint-Goodridge Hospital of Dillard University [1]	New Orleans		1,878	.....	39,922	11	4	0	0	7/1	1	$50
Long Island Hospital	Boston	J. R. Cunningham	1,083	1,083	.....	100	2	10	0	Varies	1	$100
Framingham Union Hospital	Framingham, Mass.	J. C. Merriam	3,065	763	.....	49	2	0	0	7/1	1	$42
Malden Hospital [1]	Malden, Mass.	I. J. Walker	4,701	1,465	.....	60	3	0	0	7/1	1½	$10
St. Joseph's Mercy Hospital	Ann Arbor, Mich.	G. F. Muehlig	3,320	166	30,028	61	2	0	0	7/1	1	$100
Charles Godwin Jennings Hospital	Detroit	A. F. Jennings	1,748	.....	.....	19	2	0	0	7/1	1	$84

Numerical and other references will be found on page 788.

10. MIXED—(Continued)

		Chief of Service	Inpatients Treated[3]	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Parkside Hospital	Detroit	S. H. C. Owen	1,039	773	446	25	3	0	0	7/1	1	$75
Mercy Hospital	Muskegon, Mich.	G. Le Fevre	2,982	.....	1,361	10	2	0	0	7/1	1	$100
St. Joseph Mercy Hospital	Pontiac, Mich.		5,067	.....	4,564	84	4	0	0	1/1	1	$100
Eitel Hospital	Minneapolis	A. C. Strachauer	5,474	.....	.....	32	2	0	0	7/1	1	$100
Fairview Hospital	Minneapolis	M. P. Baken	4,554	.....	1,223	54	3	0	0	7/1	1	$100
Lutheran Deaconess Home and Hospital	Minneapolis	C. R. Wall	4,151	.....	.....	47	1	0	0	7/1	1	$100
Midway Hospital	St. Paul	G. Earl	5,278	.....	2,164	70	3	0	0	7/1	1-2	$100
Northern Pacific Beneficial Association Hospital	St. Paul	A. W. Ide	2,561	.....	13,108	23	2	0	0	Varies	1	$10
Christian Hospital	St. Louis	G. A. Mellies	2,042	.....	.....	22	2	0	0	7/1	1	$20
Douglas County Hospital	Omaha		3,049	3,049	5,231	99	3	0	0	7/1	6/30	$75
Elliot Hospital	Manchester, N. H.	D. W. Parker	2,188	547	2,519	56	3	0	0	7/1	1	$25
Auburn City Hospital	Auburn, N. Y.	R. C. Almy	5,304	1,061	7,766	40	2	0	0	7/1	1	$75
Jewish Sanitarium and Hospital for Chronic Diseases	Brooklyn	A. M. Rabiner	638	638	.....	43	4	3	0	1/1	1½	$50
Kingston Hospital	Kingston, N. Y.	F. A. Johnston	3,120	374	.....	58	2	0	0	7/1	1	$50
Richmond Memorial Hospital	Staten Island, N. Y.	M. S. Lloyd	2,095	1,446	3,533	40	4	0	0	Quart.	1	$35
Highsmith Hospital	Fayetteville, N. C.	W. T. Rainey	3,056	.....	3,294	30	3	0	0	7/1&9/1	1	....
St. Agnes Hospital	Raleigh, N. C.	H. A. Royster	1,420	1,065	4,148	28	3	0	0	7/1&9/1	1	$15
Park View Hospital	Rocky Mount, N. C.	E. S. Boice	2,653	929	15,111	29	1	0	0	7/1	1	$50
St. John's Hospital[1]	Fargo, N. D.	O. A. Sedlak	3,863	.....	1,272	39	3	0	0	7/1	1	$25
Glenville Hospital	Cleveland	J. B. Price	3,480	.....	5,569	48	2	0	0	7/1	1	$60
Grant Hospital	Columbus, O.	H. A. Baldwin	6,695	492	1,825	42	3	0	0	7/1	1	$100
Mansfield General Hospital	Mansfield, O.	D. C. Lavender	4,618	1,432	495	34	1	0	0	7/1	1	$100
Hillcrest Memorial Hospital	Tulsa, Okla.	R. A. McGill	4,135	.....	.....	42	2	0	0	7/1	1	$100
St. Margaret Memorial Hospital	Pittsburgh, Pa.	B. R. Almquest	2,474	.....	7,574	35	3	0	0	Varies	1+	$40
Medical Arts Hospital	Dallas, Tex.	C. Rosser	4,485	.....	.....	5	2	0	0	7/1	1	$100
St. Mary's Infirmary	Galveston, Tex.	F. A. Garbade	3,431	506	4,336	72	1	0	0	7/1	1	....
Methodist Hospital	Houston, Tex.	J. C. Dickson	3,778	208	1,067	63	4	0	0	7/1	1	$83
Wichita Falls Clinic Hospital	Wichita Falls, Tex.	Q. B. Lee	2,969	.....	642	15	3	0	0	7/1	1	$75
Elizabeth Buxton Hospital	Newport News, Va.	R. Buxton	2,066	299	15,852	59	3	0	0	7/1	1	$50
Grace Hospital	Richmond, Va.	A. L. Herring	3,683	.....	.....	17	4	0	0	7/1	1	$50
St. Elizabeth Hospital	Richmond, Va.	J. S. Horsley	1,543	.....	5,317	36	1	0	0	7/1	1-2	$100
St. Luke's Hospital[1]	Richmond, Va.	S. McGuire	2,518	.....	.....	8	3	0	0	7/1	1	$75
McMillan Hospital	Charleston, W. Va.	J. E. Hunter	2,652	796	2,450	15	2	0	0	7/1	1	$75
St. Francis Hospital	Charleston, W. Va.	R. B. Price	2,820	350	650	17	4	0	0	7/1	1	$50
Camden-Clark Memorial Hospital	Parkersburg, W. Va.	A. C. Woofter	2,888	578	.....	44	3	0	0	7/1	1	$75
Mercy Hospital[1]	Janesville, Wis.	R. Farnsworth	2,206	.....	.....	54	1	0	0	7/1	1	$75
La Crosse Lutheran Hospital	La Crosse, Wis.	A. Gundersen	2,674	.....	1,628	34	1	0	0	7/1	1	$50

11. NEUROLOGY

Revision of list is now taking place in collaboration with the American Board of Psychiatry and Neurology.

Los Angeles County Hospital *[1]	Los Angeles	S. Ingham	1,095	1,095	3,934	196	1	0	0	7/1	2	$10
Gallinger Municipal Hospital *[9]	Washington, D. C.	W. Freeman and J. W. Watts	178	178	.....	10	1	0	0	7/1	1	$25
University of Chicago Clinics *[9]	Chicago	P. C. Bucy	.....	.....	3,358	14	0	1	1	7/1	3	$75[c]
University Hospitals *[1]	Iowa City	C. Van Epps	767	729	1,302	16	1	1	0	7/1	1-6	$21
Boston City Hospital *[1]	Boston	H. H. Merritt	460	460	.....	9	1	1	5	Varies	1+	$83
Massachusetts General Hospital *[3,4]	Boston	J. B. Ayer	457	.....	14,293	9	1	1	0	2/1&8/1	1	$42
University Hospital *[1]	Ann Arbor, Mich.	C. Camp	622	.....	4,886	13	1	1	0	7/1	1-4	$25
Henry Ford Hospital *[9]	Detroit	T. G. Hehir	780	.....	6,888	10	1	0	0	7/1	2-4	$120[c]
Eloise Hospital and Infirmary *[1]	Eloise, Mich.	R. Costello	495	495	1,473	21	1	1	0	7/1	1-2	$67
Mayo Foundation	Rochester, Minn.	(See page 788)										
Brooklyn Hospital *[9]	Brooklyn	E. J. Browder and H. R. Merwarth	286	135	1,859	17	1	0	0	7/1	1	$50
Kings County Hospital *	Brooklyn	A. Rabiner	3,546	3,546	3,469	107	2	2	0	7/1	2	$18
Bellevue Hospital *[1]	New York City	F. Kennedy	324	324	7,358	26	1	0	0	1/1&7/1	1	$83
Lenox Hill Hospital *	New York City	T. K. Davis	.....	193	1,529	7	1	0	0	1/1	1	$25
Metropolitan Hospital *[1]	New York City	S. P. Jewett	168	168	1,576	4	1	0	0	7/1	1+	$75
Montefiore Hospital for Chronic Diseases *[1]	New York City	S. P. Goodhart	223	159	804	24	1	4	1	1/1	1	$50
Morrisania City Hospital *	New York City	N. Savitsky	1,484	.....	2,108	..	1	0	0	1/1	1	None
Mount Sinai Hospital *[1,10]	New York City	.....	.....	.....	13,496	..	1	2	1	1/1&7/1	1½	$50
Neurological Institute of New York	New York City	T. J. Putnam	3,297	.....	20,265	63	1	12	0	Quart.	1+	$40
New York City Hospital *	New York City	L. V. Lyons	492	492	1,628	49	1	0	0	7/1	1	$15
Welfare Hospital for Chronic Diseases *[1]	New York City	.....	759	759	24	24	4	4	0	7/1	1+	$18
Duke Hospital *[1]	Durham, N. C.	R. W. Graves	185	139	523	4	0	1	0	7/1	1	None
Cincinnati General Hospital *[1]	Cincinnati	C. D. Aring	357	317	1,800	66	1	0	1	7/1	1	[a]
Jefferson Medical College Hospital *	Philadelphia	B. J. Alpers	332	.....	20,592	..	1	0	1	9/1	1	$50
Temple University Hospital *[1,9]	Philadelphia	T. S. Fay	466	466	3,570	29	1	0	0	9/1	3	$40

12. NEUROSURGERY

Los Angeles County Hospital *[1]	Los Angeles	C. Rand	1,603	1,603	673	7	2	0	0	7/1	2-3	$10
University of California Hospital *[1]	San Francisco	H. C. Naffziger	396	125	.....	9	2	0	0	7/1	1+	$25
Presbyterian Hospital *	Chicago	A. Verbrugghen	108	11	.....	5	1	0	0	1/1	1-2	None
Research and Educational Hospital *	Chicago	E. Oldberg	415	413	.....	30	2	0	0	7/1	3	$50
St. Luke's Hospital *	Chicago	E. Oldberg	420	64	.....	18	1	0	0	7/1	1-3	$35
Johns Hopkins Hospital *	Baltimore	W. E. Dandy	644	325	.....	32	0	1	0	7/1	1-2	None
Boston City Hospital *[1]	Boston	D. Munro	420	420	.....	17	1	1	0	Varies	1+	$83
Lahey Clinic	Boston	G. Horrax	600	.....	.....	..	0	0	4	1/1, 7/1, 9/1	1-2	$100[c]
Massachusetts General Hospital *[3,4]	Boston	W. J. Mixter	329	.....	.....	19	1	0	0	1/1&7/1	1	$42
Henry Ford Hospital *	Detroit	A. S. Crawford	283	.....	924	8	1	1	0	9/1	2-3	$130[c]
Mayo Foundation	Rochester, Minn.	(See page 788)										
Barnes Hospital *	St. Louis	Sachs	318	.....	.....	22	0	0	2	1/1&7/1	1-3	$75
Albany Hospital *	Albany, N. Y.	E. H. Campbell, Jr.	302	120	.....	18	1	1	0	7/1	1	$75
Jewish Hospital *[1]	Brooklyn	L. M. Davidoff	347	164	508	14	1	1	1	1/1	2	$25
Kings County Hospital *	Brooklyn	E. J. Browder	3,054	3,054	1,642	139	1	1	0	7/1	1	$18
Edward J. Meyer Memorial Hospital *	Buffalo	W. B. Hamby	42	42	60	4	1	0	0	7/1	3	$75[c]
Neurological Institute of New York	New York City	B. P. Stookey	.....	.....	.....	..	1	3	0	Quart.	1+	$40
Strong Memorial and Rochester Municipal Hospitals *	Rochester, N. Y.	W. P. Van Wagenen	363	272	438	..	1	0	0	7/1	1-2	$67
Cleveland Clinic Foundation Hospital	Cleveland	W. J. Gardner	577	.....	.....	22	..	..	..	7/1	1-3	$55
Hospital of the University of Pennsylvania *	Philadelphia	F. C. Grant	434	.....	164	27	1	0	2	7/1	3	None
Temple University Hospital *[1]	Philadelphia	(See Neurology)										
Medical College of Virginia, Hospital Div. *	Richmond	C. C. Coleman	1,016	.....	492	33	1	1	0	7/1	1	$25

Numerical and other references will be found on page 788.

13. OBSTETRICS

The following services accredited by the Council are fully approved by the American Board of Obstetrics and Gynecology:

		Chief of Service	Inpatients Treated[a]	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Hospital for Children *[2]	San Francisco	H. Stephenson	1,200	190	2,526	6	0	1	0	7/1	1	$ 5
Research and Educational Hospital *	Chicago	F. Falls	697	607	.....	2	3	0	0	7/1	1-3	$50
Little Company of Mary Hospital *[1]	Evergreen Park, Ill.	P. E. Lawler	1,595	1,503	.....	1	1	0	0	10/1	1-2	$50
Johns Hopkins Hospital *	Baltimore	N. J. Eastman	2,062	1,654	16,215	4	1	4	0	7/1&9/1	1-6	None
University Hospital *[1]	Baltimore	L. H. Douglass	1,542	.....	12,034	2	1	3	0	7/1	1-4	None
Boston Lying-in Hospital	Boston	F. C. Irving	3,453	3,351	31,291	..	1	2	0	1/1&7/1	1½	$50
Providence Hospital *	Detroit	R. W. Alles	2,675	.....	.....	4	1	0	0	7/1	1	$100
Margaret Hague Maternity Hospital [1]	Jersey City, N. J.	S. A. Cosgrove	6,285	3,556	35,402	51	7	0	0	Quart.	1¾	$400
Methodist Hospital *	Brooklyn	O. P. Humpstone	2,548	1,002	14,268	2	1	1	0	7/1	1	$90
Buffalo General Hospital *	Buffalo	F. C. Goldsborough	864	551	3,267	2	1	0	0	7/7	1-2	$25
Millard Fillmore Hospital *	Buffalo	M. G. Potter	1,926	133	600	2	1	0	0	7/1	1	$25
French Hospital *	New York City	F. C. Holden	1,638	564	6,548	1	1	0	0	7/1	1	$83
New York Infirmary for Women and Children *[2]	New York City	A. Hubert and W. Ragland	1,116	840	5,949	..	1	0	0	7/1	1	$15
Syracuse Memorial Hospital *	Syracuse, N. Y.	H. W. Schoeneck	1,444	572	1,969	2	1	0	0	7/1	1	None
Cincinnati General Hospital *	Cincinnati	H. L. Woodward	2,956	3,571	32	2	2	0	0	7/1	1-3	[a]
Jefferson Medical College Hospital *	Philadelphia	N. W. Vaux	3,551	.....	14,457	0	0	0	0	7/1&10/1	1-3	$50
Elizabeth Steel Magee Hospital	Pittsburgh	C. E. Ziegler	3,488	1,635	9,582	6	2	3	0	9/1	5	$33
St. Joseph's Infirmary	Houston, Tex.	H. W. Johnson	3,606	165	674	2	1	1	0	7/1	1-2	$25

The following services, approved by the Council, are now being reviewed in collaboration with the American Board of Obstetrics and Gynecology:

Garfield Memorial Hospital *	Washington, D. C.	A. Y. P. Garnett	2,028	420	2,305	0	1	1	0	7/1	1-2	$50
Sibley Memorial Hospital *	Washington, D. C.	J. Kotz	2,174	42	.....	3	1	0	0	7/1	1-2	$65
Chicago Maternity Center [1]	Chicago	B. E. Tucker	[a]	.....	19,210	74	1	0	0	1/1	1	None
Cook County Hospital *[1]	Chicago	D. S. Hillis	8,416	8,416	16,580	56	6	0	2	1/1&7/1	2	$25
Grant Hospital *	Chicago	.....	1,749	335	3,881	2	1	0	0	7/1	1-3	$50
Provident Hospital *[1]	Chicago	P. M. Santos	746	.....	3,810	1	1	0	0	7/7	1-3	$50
St. Vincent's Infant and Maternity Hospital	Chicago	H. E. Schmitz	257	257	1,028	3	1	0	0	7/1	1	$50
Indiana University Medical Center *[1]	Indianapolis	H. F. Beckman	1,263	.....	4,631	18	1	0	0	7/1	1-2	$83
Touro Infirmary *	New Orleans	W. E. Levy	1,328	.....	11,922	3	2	0	0	7/1	1	$25
Baltimore City Hospitals *	Baltimore	L. H. Douglass	2,636	2,636	.....	2	1	2	0	7/1	1	$12
Franklin Square Hospital *	Baltimore	I. A. Siegel	672	325	1,281	0	0	1	0	7/1	1	$10
Provident Hospital and Free Dispensary *	Baltimore	L. H. Douglass	277	266	726	..	1	0	0	10/15	1	$25
Sinai Hospital *	Baltimore	M. W. Aaronson	1,007	449	3,786	1	1	1	0	7/1	1	$50
Union Memorial Hospital *	Baltimore	J. McF. Bergland	608	.....	2,252	2	1	1	0	7/1	1-2	$30
Massachusetts Memorial Hospital *	Boston	C. W. Nail	926	.....	6,046	1	2	0	0	8/1	2	$95
Cooper Hospital *	Camden, N. J.	A. B. Davis and G. B. German	1,672	.....	7,447	0	1	0	0	7/1	3	$100
Anthony N. Brady Maternity Home	Albany, N. Y.	G. E. Lochner	1,444	448	2,402	0	1	0	0	7/1	1-2	$100
Cumberland Hospital *	Brooklyn	S. Lubin	1,335	1,335	8,506	2	1	1	0	1/1&7/1	1	$18
Norwegian Lutheran Deaconesses' Home and Hospital *[1]	Brooklyn	B. Harris and J. B. Dowd	954	.....	3,680	..	1	0	0	7/1	1	None
Fordham Hospital *	New York City	A. C. Butts	1,297	1,297	7,652	4	1	0	0	7/1	1	$18
Harlem Hospital *[1]	New York City	F. A. Isasohm	3,109	3,109	19,830	2	1	0	0	7/1	1	$18
Lenox Hill Hospital *	New York City	R. C. Van Etten	.....	1,105	4,470	1	1	0	0	7/1	1	$50
Morrisania City Hospital *	New York City	H. Aranow	1,215	1,215	4,528	..	1	1	0	7/1	1	$18
New York Polyclinic Medical School and Hospital *	New York City	.....	972	.....	2,441	1	1	0	0	7/1	2	$128
Watts Hospital *	Durham, N. C.	R. A. Ross	739	147	864	1	1	0	0	7/1	1	$50
City Hospital *	Cleveland	A. H. Bill	1,649	1,649	3,323	6	1	2	0	7/1	1-3	$40
Mount Sinai Hospital *[1]	Cleveland	M. Garber	1,639	96	746	2	1	0	0	7/1	1	$65
St. Ann's Maternity Hospital	Cleveland	J. R. Thompson	2,015	.....	1,560	1	3	0	0	7/1	1	$50
St. John's Hospital *	Cleveland	J. O'Connell	1,279	1,279	.....	1	1	0	0	7/1	1-2	$50
University Hospitals *[1]	Cleveland	A. H. Bill	2,781	1,048	22,316	1	4	1	0	7/1	2	$25
Miami Valley Hospital *	Dayton, O.	G. Erbaugh	1,621	490	.....	3	1	0	0	7/1	1+	$75
St. Vincent's Hospital *[1]	Toledo, O.	R. C. King	993	124	706	1	1	0	0	7/1	1-3	$100
George F. Geisinger Memorial Hospital *	Danville, Pa.	R. E. Nicodemus	665	.....	2,992	0	1	0	0	9/1	1	$50
Woman's Hospital *[2]	Philadelphia	.....	996	.....	3,331	0	1	0	0	3/1	1	$25
St. Francis Hospital *	Pittsburgh	J. H. Carroll	1,324	.....	1,515	0	1	0	0	9/1	1	$65
Baroness Erlanger Hospital *	Chattanooga, Tenn.	H. P. Hewitt	2,120	1,306	5,091	5	1	0	0	7/1	1-2	$40
John Gaston Hospital *	Memphis, Tenn.	W. T. Pride	3,320	.....	12,563	7	1	1	0	7/1	1	$33
Baylor University Hospital *	Dallas, Tex.	W. E. Massey	1,627	191	5,174	2	1	1	0	7/1	1-2	$38
Parkland Hospital *[1]	Dallas, Tex.	W. T. Robinson	2,003	.....	6,775	3	2	0	0	1/1&7/1	2	$25
Medical College of Virginia, Hospital Div. *	Richmond	H. H. Ware	1,541	.....	5,827	9	1	1	0	7/1	1	$25

14. OBSTETRICS-GYNECOLOGY

The following services accredited by the Council are fully approved by the American Board of Obstetrics and Gynecology:

Los Angeles County Hospital *[1]	Los Angeles	F. M. Lazard	7,977	7,977	10,830	18	7	0	0	4/1&10/1	3	$10
Highland-Alameda County Hospital *[1]	Oakland, Calif.	C. W. Page and C. A. DePuy	2,233	2,233	.....	4	1	1	0	7/1	1-3	$0
Stanford University Hospitals *[1]	San Francisco	L. A. Emge	1,606	1,606	13,985	5	1	2	0	7/1	1-2	$25
University of California Hospital *[1]	San Francisco	E. W. Lynch	3,173	3,173	13,611	5	1	3	0	7/1	1+	$25
New Haven Hospital *[1]	New Haven, Conn.	A. H. Morse	1,720	.....	7,779	4	2	1	0	7/1	1+	[a]
Columbia Hospital for Women and Lying-in Asylum [1]	Washington, D. C.	.....	3,846	1,449	11,497	5	4	2	0	1/1&7/1	1½	None
Gallinger Municipal Hospital *[1]	Washington, D. C.	H. F. Kane	3,349	3,349	5,626	15	2	2	0	7/1	1	$25
Grady Hospital *	Atlanta, Ga.	.....	5,803	5,803	55,615	25	2	4	0	7/1	1+	$20
University Hospital *[1]	Augusta, Ga.	R. Torpin	2,464	.....	3,906	11	1	2	0	7/1	1-2	$35
Michael Reese Hospital *[1]	Chicago	J. L. Baer	3,442	1,072	518	5	2	0	0	1/1&7/1	1-2	$50
Mount Sinai Hospital *[1]	Chicago	.....	1,435	323	3,072	7	1	0	0	7/1	1	$30
Presbyterian Hospital *	Chicago	N. P. Heaney	1,977	693	.....	2	3	0	0	Varies	2¼	$50
University Hospitals *[1]	Iowa City	E. D. Plass	3,276	3,113	3,142	8	1	3	0	7/1	1-6	$21
University of Kansas Hospitals *	Kansas City, Kan.	L. A. Calkins	1,352	.....	6,520	3	1	3	0	7/1	1-4	$50
Louisville City Hospital *	Louisville, Ky.	C. W. Hibbitt	2,690	2,690	16,283	6	1	5	0	7/1	1-4	$14
Maryland General Hospital *	Baltimore	E. P. Kloman and K. B. Boyd	940	159	1,352	1	2	0	0	7/1	1-2	$25
Mercy Hospital *	Baltimore	A. Samuels and E. P. Smith	1,403	.....	3,465	8	1	1	0	9/1	3	$25
Boston City Hospital *[1]	Boston	R. M. Green	6,010	6,010	18,727	5	2	0	0	Varies	1+	None
Carney Hospital *	Boston	L. E. Phaneuf	1,087	531	5,066	1	1	2	0	1/1,5/1,9/1	1 2	None
University Hospital *[1]	Ann Arbor, Mich.	N. F. Miller	2,279	.....	11,590	30	2	2	0	7/1	1-4	$25
City of Detroit Receiving Hospital *[1,10,11]	Detroit	W. F. Seeley	1,040	1,040	5,191	15	2	2	0	7/1	4	$75
Florence Crittenton Hospital	Detroit	E. E. Martner	2,754	643	3,989	1	1	2	0	7/1	3	$50
Grace Hospital *	Detroit	M. A. Darling	3,894	1,168	3,718	..	1	2	0	7/1&9/1	3	$50

Numerical and other references will be found on page 788.

14. OBSTETRICS-GYNECOLOGY—(Continued)

		Chief of Service	Inpatients Treated[2]	Service or Home Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Henry Ford Hospital *	Detroit	J. P. Pratt	1,822	.....	19,825	14	1	2	0	9/1	4	$130c
Herman Kiefer Hospital	Detroit	W. F. Seeley	2,132	2,132	.....	51	2	0	0	7/1	1	$150
Minneapolis General Hospital *[1]	Minneapolis	J. H. Simons	2,222	2,223	11,058	8	0	0	2	1/1&7/1	3	$25
University Hospitals *[1]	Minneapolis	J. L. McKelvey	1,247	.....	7,051	9	1	0	4	7/1	3	$50
Mayo Foundation	Rochester, Minn.	(See page 788)										
Ancker Hospital *	St. Paul	L. W. Barry	1,579	1,579	10,515	11	1	0	0	7/1	3	$50
St. Louis City Hospital *	St. Louis	G. Jones and T. R. Ayars	3,429	3,429	9,068	63	1	4	0	7/1	1-3	$50
St. Louis Maternity Hospital [1]	St. Louis		2,139	1,215	.....	0	1	1	0	7/1	1-3	None
St. Luke's Hospital *	St. Louis	C. D. O'Keefe	1,145	.....	1,324	4	0	1	0	7/1	1	$50
Creighton Memorial St. Joseph's Hospital *	Omaha	M. E. Grier	1,659	.....	.....	5	1	0	0	7/1	1	$50
University of Nebraska Hospital *	Omaha	C. Sage	919	919	3,801	3	2	0	0	7/1	1-3	$50
Greenpoint Hospital *[1]	Brooklyn	T. S. Welton	1,633	1,633	12,821	9	2	0	0	9/1	1	None
Jewish Hospital *[1]	Brooklyn		4,465	1,233	8,328	1	2	4	0	1/1&7/1	2	$.5
Kings County Hospital *	Brooklyn	R. Garlick and C. Gordon	7,519	7,519	26,372	25	4	0	0	7/1	1	$18
Long Island College Hospital *	Brooklyn	A. C. Beck	2,462	1,124	14,386	3	1	2	0	7/1	3	$25
Bellevue Hospital *[1]	New York City	W. E. Studdiford	4,303	4,303	26,463	13	2	1	0	1/1&7/1	3	$75
Flower and Fifth Avenue Hospitals *	New York City	L. S. Loizeaux	2,672	891	4,570	5	1	0	0	7/1	1	$25
Lincoln Hospital *	New York City	E. J. Davin	2,690	2,690	18,708	5	2	2	0	1/1&7/1	1+	$18
Sloane Hospital for Women [1]	New York City	R. P. Watson	4,783	3,106	34,995	..	1	11	0	1/1&7/1	1-3	None
Woman's Hospital [1]	New York City	A. H. Aldridge	4,008	2,044	40,071	5	11	0	0	Quart.	1-3	$10
Strong Memorial and Rochester Municipal Hospitals *	Rochester, N. Y.	K. M. Wilson	2,884	1,791	12,557	7	1	2	2	7/1	1-4	$12
Duke Hospital *[1]	Durham, N. C.	B. Carter	1,907	1,604	13,545	43	1	3	4	7/1	2-7	None
Hahnemann Hospital *	Philadelphia	E. B. Craig and W. C. Mercer	1,646	.....	8,097	2	0	1	0	9/1	2	$50
Hospital of the University of Pennsylvania *	Philadelphia	C. C. Norris	2,588	.....	14,625	7	3	0	0	9/1	3	None
Kensington Hospital for Women	Philadelphia	E. A. Schumann	1,541	1,541	7,069	5	2	1	0	7/1	1-3	$25
Pennsylvania Hospital	Philadelphia		4,214	1,736	17,017	7	3	0	0	1/1,5/1,9/1	1-2	$30
Philadelphia General Hospital *[1]	Philadelphia		5,067	5,067	11,894	..	1	0	0	7/1 or 8/1	1-2	$100
Roper Hospital *	Charleston, S. C.	L. A. Wilson	1,462	1,040	16,000	8	1	1	1	7/1	1-3	$10
John Sealy Hospital *[1]	Galveston, Tex.	W. R. Cooke	1,576	.....	8,776	..	2	1	0	7/1	1-3	$25

The following services, approved by the Council, are now being reviewed in collaboration with the American Board of Obstetrics and Gynecology:

Hillman Hospital *	Birmingham, Ala.		3,430	3,430	20,210	15	2	0	0	7/1	1	$50
White Memorial Hospital *[1]	Los Angeles	R. J. Thompson	1,810	.....	13,620	1	2	0	0	7/1	3	$80
San Francisco Hospital *[1]	San Francisco	W. G. Moore and A. V. Pettit	2,067	2,067	.....	..	4	0	0	7/1	1	$50
Santa Clara County Hospital *	San Jose, Calif.	A. Shufelt	1,434	1,434	12,430	..	1	0	0	7/1	1	$75
Grace Hospital *	New Haven, Conn.	H. B. Perrins	1,659	302	1,217	2	1	0	0	7/1	3	$80
Freedmen's Hospital *	Washington, D. C.	J. W. Ross	2,741	2,741	8,643	22	1	2	0	7/1&10/1	1-2	$10
Chicago Lying-in Hospital and Dispensary	Chicago		(See University of Chicago Clinics)									
Mercy Hospital-Loyola University Clinics *	Chicago	H. E. Schmitz	1,282	263	6,644	11	2	0	0	7/1	1-3	$50
St. Luke's Hospital *	Chicago	H. O. Jones	1,991	285	8,788	9	2	1	0	7/1	1-3	$25
University of Chicago Clinics *[1,6]	Chicago	F. L. Adair	3,978	3,978	34,651	5	3	4	0	1/1&7/1	3	None
Indianapolis City Hospital *[1]	Indianapolis	J. W. Hoffmann and H. F. Beckman	2,077	.....	16,824	18	2	0	1	7/1	1-2	$42
Charity Hospital *[1]	New Orleans		13,378	13,378	47,453	61	9	5	0	7/1	1-3	$25
St. Joseph's Hospital *	Baltimore	W. L. Galvin	1,380	.....	3,246	2	1	1	0	7/1	2-3	$10
Harper Hospital *	Detroit	G. Kamperman	2,400	202	.....	..	1	2	0	7/1	1-3	$25
Woman's Hospital [1]	Detroit	H. M. Nelson and L. E. Daniels	3,978	.....	2,686	7	2	7	1	7/1	1-3	$75
Kansas City General Hospital *	Kansas City, Mo.	R. R. Wilson	1,964	1,964	9,305	10	3	0	0	7/1	3	$50
Homer G. Phillips Hospital *[1]	St. Louis	T. K. Brown	3,640	3,640	25,532	17	2	2	0	7/1	1-3	$75
Jewish Hospital *	St. Louis	S. Weintraub	1,405	109	1,882	2	1	0	0	7/1	1+	$70
St. Mary's Group of Hospitals *	St. Louis	W. H. Vogt	2,780	1,478	14,520	13	0	0	6	7/1	3	$25
St. Mary's Hospital *	Brooklyn	E. A. Keyes	1,666	931	6,036	2	1	1	0	7/1	1-2	$40
Edward J. Meyer Memorial Hospital *	Buffalo	F. C. Goldsborough	1,453	1,453	8,203	9	1	2	1	7/1	3-4	$50e
Queens General Hospital *[1]	Jamaica, N. Y.	F. A. Flemming	2,971	2,971	5,565	13	1	1	0	7/1	1	$18
Lying-in Hospital	New York City	H. Stander	5,021	3,906	40,987	13	2	5	0	7/1	2-6	$13
Metropolitan Hospital *[1]	New York City	H. B. Safford	2,035	2,005	13,310	3	2	0	0	7/1	1+	$18
New York City Hospital *.	New York City	J. V. Ricci and K. Johnson	1,826	1,826	4,312	6	1	0	0	7/1	1	None
Mercy Hospital *	Canton, O.	L. E. Leavenworth	1,874	161	.....	2	1	0	0	7/1	1	$65
St. Luke's Hospital *	Cleveland	G. B. Hurd and C. T. Hemmings	2,167	395	3,543	2	2	1	0	6/25	3	$50
Huron Road Hospital *	East Cleveland, O.	G. J. Salisbury and S. C. Runnels	2,344	91	927	2	1	1	0	7/1	1-3	$30
Lucas County General Hospital *	Toledo, O.	E. C. Mohr	1,695	1,005	2,366	9	1	0	0	7/1	1	$50
University Hospitals *	Oklahoma City	G. Penick and W. W. Wells	1,064	995	8,888	11	1	1	0	7/1	2	$50
University of Oregon Medical School Hospitals and Clinics *	Portland	R. E. Watkins	2,221	2,221	12,348	12	1	3	0	7/1	4	$40
George W. Hubbard Hospital of Meharry Medical College *[1]	Nashville, Tenn.	C. S. McMurrey and R. S. Duke	632	.....	2,708	6	1	0	0	7/1	1-2	$75
Nashville General Hospital *	Nashville, Tenn.	D. C. Seward and M. S. Lewis	1,835	1,797	17,337	9	1	2	0	7/1	1-2	$35
Vanderbilt University Hospital *[1]	Nashville, Tenn.	L. E. Burch	1,373	884	12,393	3	1	3	0	7/1	1+	$35
University of Virginia Hospital *	Charlottesville	T. J. Williams	1,264	1,264	5,255	2	1	2	0	7/1	1	$50
State of Wisconsin General Hospital *[1]	Madison	J. W. Harris	1,003	.....	5,407	4	1	1	1	7/1	3	$25
Milwaukee County Hospital *[1]	Wauwatosa, Wis.	A. H. Lahmann	2,610	2,610	16,325	5	2	1	0	7/1&7/15	1	$50

15. OPHTHALMOLOGY

Los Angeles County Hospital *[1]	Los Angeles	A. Irvine and W. Boyce	701	.....	15,102	1	2	0	0	1/1	2	$10
White Memorial Hospital *	Los Angeles	W. A. Boyce	193	.....	13,015	0	1	0	0	7/1	1-3	$80
Green's Eye Hospital	San Francisco	A. S. Green	711	.....	46,063	..	1	0	0	7/1	2	$50
San Francisco Hospital *[1]	San Francisco		642[3]	642[3]	.....	..	1	0	0	7/1	1	$50
Stanford University Hospitals *[1]	San Francisco	H. Barkan	505	221	10,985	..	1	2	0	7/1	1-2	$25
University of California Hospital *[1]	San Francisco	H. C. Naffziger	261	221	15,804	..	0	2	0	7/1	1+	$25
Colorado General Hospital *[1,5]	Denver	W. M. Bane	121	121	11,030	..	1	1	0	8/1	2	$40
Episcopal Eye, Ear and Throat Hospital	Washington, D. C.		6,230[3]	2,056[3]	50,471[3]	..	4	0	0	3/1, 7/1, 11/1	1½	None
Cook County Hospital *[1]	Chicago	W. F. Monoreiff	743	743	20,291	0	5	0	0	1/1&7/1	2	$25
Illinois Eye and Ear Infirmary [1]	Chicago	H. S. Gradle	2,699	2,699	260,910	0	7	7	0	1/1&7/1	1	None
Michael Reese Hospital *[1]	Chicago	S. J. Meyer	586	98	683	..	1	0	0	7/1	1	$50

Numerical and other references will be found on page 788.

15. OPHTHALMOLOGY—(Continued)

	Chief of Service	Inpatients Treated a	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Passavant Memorial Hospital *[1] ..... Chicago.....	S. R. Gifford.....	383	87	8,831	1	1	0	0	7/1	1	None
Presbyterian Hospital * ..... Chicago.....	W. F. Monereiff.....	159	6	.....	..	2	0	0	1/1&7/1	1	$25
Research and Educational Hospital *..... Chicago.....	H. Beard	234	234	.....	0	1	0	0	7/1	1	$50
University of Chicago Clinics *..... Chicago.....	E. V. L. Brown.....	184	.....	9,303	0	1	3	3	7/1	1-3	$25
Indianapolis City Hospital * ..... Indianapolis.....	B. J. Larkin.....	382	382	6,548	1	1	1	0	7/1	2	$42
Indiana University Medical Center *[1]..... Indianapolis.....	W. F. Hughes.....	375	375	3,019	..	1	0	0	7/1	1-3	$63
University Hospitals *[1] ..... Iowa City.....	C. S. O'Brien.....	1,043	991	7,057	1	1	2	1	1/1&7/1	1-6	$21
Eye, Ear, Nose and Throat Hospital..... New Orleans.....	W. R. Buffington and W. B. Clark.....	752	.....	17,881	..	3	3	0	7/1	2	None
Johns Hopkins Hospital * ..... Baltimore.....	A. C. Woods.....	1,243	701	21,056	1	1	4	0	7/1&9/1	1-4	None
Massachusetts Eye and Ear Infirmary..... Boston.....	E. B. Dunphy.....	2,982	2,203	53,302	0	8	0	0	Quart.	2	None
University Hospital *[1] ..... Ann Arbor, Mich.....	F. B. Fralich.....	684	.....	11,344	0	2	1	0	7/1	1-3	$25
Henry Ford Hospital * ..... Detroit.....	E. L. Whitney.....	253	.....	17,992	0	1	2	0	9/1	3	$130c
University Hospitals *[1] ..... Minneapolis.....	F. E. Burch.....	184	.....	6,846	..	0	0	2	7/1	3	$50
Barnes Hospital * ..... St. Louis.....	L. T. Post.....	464	.....	19,970	1	1	1	0	7/1	1-3	$75
St. Louis City Hospital *..... St. Louis.....	L. T. Post.....	149	149	8,497	0	1	1	0	7/1	1-2	$50
St. Mary's Group of Hospitals *..... St. Louis.....	W. H. Luedde.....	138	90	9,530	0	0	0	2	7/1	3	$25
Brooklyn Eye and Ear Hospital..... Brooklyn.....	.....	1,915	1,915	63,109	0	6	0	0	3/1,7/1,11/1	2	None
Kings County Hospital * ..... Brooklyn.....	W. Moehle	513	513	12,250	2	1	1	0	1/1&7/1	1	$18
Long Island College Hospital *[1]..... Brooklyn.....	J. N. Evans.....	219	201	6,992	..	1	1	2	7/1	4	$23
Edward J. Meyer Memorial Hospital *..... Buffalo.....	I. J. Koenig.....	147	147	6,159	..	1	2	0	7/1	3-4	$56c
Queens General Hospital *[1] ..... Jamaica, N. Y.....	W. G. Frey.....	285	285	10,156	..	1	0	0	7/1	1	$18
Bellevue Hospital *[1] ..... New York City.....	D. B. Kirby.....	730	730	22,517	0	6	0	0	1/1&7/1	1	Varies
Manhattan Eye, Ear and Throat Hospital. New York City.....	.....	1,933	1,507	81,402	1	7	0	0	1/1,5/1,9/1	2½	None
Metropolitan Hospital *[1] ..... New York City.....	.....	175	175	5,250	1	1	0	0	7/1	1+	$18
Mount Sinai Hospital *[1-10] ..... New York City.....	.....	.....	.....	16,916	..	1	1	0	7/1	2	$50
New York Eye and Ear Infirmary..... New York City.....	.....	2,950	.....	83,612	..	8	0	0	Quart.	3	None
Presbyterian Hospital *[1] ..... New York City.....	P. Thygeson and J. M. Dunnington	2,334	1,323	35,123	..	1	5	0	1/1&7/1	3	None
St. Luke's Hospital * ..... New York City.....	W. G. Frey.....	211	174	9,074	0	1	1	0	12/1	1½	$25
Welfare Hospital for Chronic Diseases *[1-3] New York City.....	.....	250	250	3,800	..	1	1	0	7/1	1+	$18
Strong Memorial and Rochester Municipal Hospitals * ..... Rochester, N. Y.....	J. F. Gipner.....	266	199	7,613	..	1	1	0	7/1	2	$42
Grasslands Hospitals *[1] ..... Valhalla, N. Y.....	E. C. Wood.....	106	106	5,630	0	1	0	0	7/1	1-2	$75
Cincinnati General Hospital * ..... Cincinnati.....	D. T. Vail.....	443	443	10,467	..	1	1	0	7/1	1-2	a
City Hospital *[1] ..... Cleveland.....	P. W. Moore.....	209	209	6,668	1	1	0	0	7/1	1-3	$40
University Hospitals *[1] ..... Cleveland.....	A. B. Bruner.....	631	264	9,087	2	1	1	0	7/1	2	$25
University of Oregon Medical School Hospitals and Clinics * ..... Portland.....	F. A. Kieble.....	193	193	15,955	1	1	0	0	7/1	1	$40
Graduate Hospital of the University of Pennsylvania * ..... Philadelphia.....	W. Shoemaker and I. C. Peter	356	356	5,638	2	1	0	0	7/1	1	None
Hospital of the University of Pennsylvania * Philadelphia.....	F. H. Adler.....	407	.....	6,356	0	0	0	4	7/1	3	None
Temple University Hospital *[1] ..... Philadelphia.....	W. I. Lillie.....	223	223	5,856	0	1	0	0	9/1	3	$40
Wills Hospital ..... Philadelphia.....	.....	3,725	2,732	132,946	0	9	0	0	Quart.	2¼	None
Jefferson Davis Hospital *[1] ..... Houston, Tex.....	F. J. Slataper.....	358	358	4,758	0	1	0	0	7/1	1	$50

16. OPHTHALMOLOGY-OTOLARYNGOLOGY

San Diego County General Hospital *..... San Diego, Calif.....	C. W. Brown and F. M. Bond	1,021	1,021	7,069	..	1	0	0	7/1	1	$115
Hospital for Children *[2] ..... San Francisco.....	G. Hosford and R. C. Martin	830	122	4,425	0	1	0	0	7/1	1	$25
Gallinger Municipal Hospital * ..... Washington, D. C....	D. Davis	1,222	1,222	2,620	1	1	1	0	7/1	1	$25
Grady Hospital * ..... Atlanta, Ga.....	.....	1,845	1,845	21,177	3	2	2	0	7/1	1-3	$29
Provident Hospital * ..... Chicago.....	C. L. Forney.....	439	.....	11,332	..	0	0	1	7/1	1-3	$40
Louisville City Hospital * ..... Louisville, Ky.....	C. Wolfe and W. Dean	1,250	1,250	12,171	1	1	0	0	7/1	1	$50
Charity Hospital *[1] ..... New Orleans.....	.....	6,575	.....	53,574	14	7	6	0	7/1	1-3	$25
Touro Infirmary * ..... New Orleans.....	A. R. Crebbin and H. L. Kearney	1,335	.....	17,337	..	2	0	0	7/1	1	$15
Baltimore Eye, Ear and Throat Charity Hospital [1] ..... Baltimore.....	.....	2,823	1,270	20,545	..	4	0	0	7/1	1-2	None
University Hospital * ..... Baltimore.....	E. A. Looper and C. A. Clapp	991	.....	8,678	2	0	2	0	7/1	1-4	None
Boston City Hospital *[1] ..... Boston.....	J. J. Regan and L. M. Freedman	4,995	4,995	53,729	8	2	0	0	Varies	1+	None
City of Detroit Receiving Hospital *[1-10].... Detroit.....	P. Heath and J. M. Robb	1,053	1,053	7,879	8	2	0	0	7/1	2	$75e
Grace Hospital * ..... Detroit.....	N. Bentley	1,697	512	5,486	..	1	0	0	7/1&9/1	1-2	$50
Harper Hospital * ..... Detroit.....	P. Heath and J. M. Robb	3,232	373	.....	..	1	3	0	7/1	1-3	$25
Shurly Hospital ..... Detroit.....	B. R. Shurly and M. Wainger	556	.....	12,825	0	2	0	0	7/1	1-3	$25
Eloise Hospital and Infirmary *[1]..... Eloise, Mich.....	R. Beattie	338	338	1,524	3	1	1	0	7/1	1-2	$50
Minneapolis General Hospital *[1] ..... Minneapolis.....	M. C. Pfunder.....	1,310	.....	11,242	1	0	0	2	7/1	3	$25
Mayo Foundation ..... Rochester, Minn.....	(See page 788)										
Ancker Hospital * ..... St. Paul.....	R. O. Leavenworth....	1,276	.....	12,646	2	2	0	0	7/1	2	$50
Children's Mercy Hospital ..... Kansas City, Mo.....	A. J. Baer and H. Beal	1,148	1,148	6,593	5	1	0	0	7/1	1-2	$25
Kansas City General Hospital *..... Kansas City, Mo.....	A. W. McAlester and P. Lux	541	541	8,384	1	2	0	0	7/1	1	$50
Homer G. Phillips Hospital *[1]..... St. Louis.....	T. E. Sanders and L. J. Birsner	710	710	7,236	6	2	2	0	7/1	1-3	$75
Jersey City Hospital * ..... Jersey City, N. J.....	.....	2,192	1,030	13,325	..	2	2	0	7/1	1-2	$75
Newark Eye and Ear Infirmary..... Newark, N. J.....	W. P. Eagleton.....	2,141	.....	29,843	8	3	0	0	2/1, 6/1, 10/1	1	None
Harlem Eye and Ear Hospital ..... New York City.....	C. B. Meding.....	1,648	.....	32,569	0	3	0	0	Varies	3	None
New York Polyclinic Medical School and Hospital * ..... New York City.....	.....	1,788	.....	15,808	4	4	0	0	1/1&7/1	2	None
New York Post-Graduate Medical School and Hospital * ..... New York City.....	J. W. White and A. Nilsen	1,789	1,276	31,495	1	1	5	0	5/1&11/1	3	None
Rochester General Hospital * ..... Rochester, N. Y.....	E. W. Kennedy and C. S. Nash	.....	.....	8,534	..	2	0	0	7/1	2	$50
Duke Hospital *[1] ..... Durham, N. C.....	W. B. Anderson and W. W. Eagle.....	1,122	926	9,048	1	1	3	2	7/1	1-3	None
Starling-Loving University Hospital *[1].... Columbus, O.....	A. D. Frost and H. G. Beatty	520	.....	6,789	0	1	0	0	7/1	1	$25
University Hospitals * ..... Oklahoma City.....	W. W. Westfall and T. C. Walls	697	566	5,351	5	1	1	0	7/1	1-2	$50
Eye, Ear, Nose and Throat Hospital..... Pittsburgh.....	W. E. Carson and J. H. McCready	4,102	3,383	18,284	6	4	0	0	7/1	1½	None
Knoxville General Hospital * ..... Knoxville, Tenn.....	J. L. Montgomery.....	651	.....	4,775	4	1	0	0	7/1	1	$40
Memphis Eye, Ear, Nose and Throat Hosp. Memphis, Tenn.....	E. C. Ellett and L. Levy	1,500	583	16,699	0	4	0	0	1/1&7/1	2	None

Numerical and other references will be found on page 788.

16. OPHTHALMOLOGY-OTOLARYNGOLOGY—(Continued)

		Chief of Service	Inpatients Treated*	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Nashville General Hospital *	Nashville, Tenn.	E. L. Roberts	793	791	8,544	1	1	1	0	7/1	1-2	$35
Parkland Hospital *[1]	Dallas, Tex.	J. G. Jones and J. D. Singleton	636	.....	5,678	2	1	0	0	7/1	1	$25
University of Virginia Hospital *	Charlottesville	E. Burton and F. D. Woodward	1,197	1,197	7,555	2	1	2	0	7/1	1	$25
Medical College of Virginia, Hospital D.v.*	Richmond	R. H. Courtney	1,331	.....	11,214	3	2	2	0	7/1	1	$25
Gill Memorial Eye, Ear and Throat Hosp.	Roanoke, Va.	E. G. Gill	722	.....	11,471	0	1	1	0	1/1&7/1	1-2	$50
King County Hospital *[15]	Seattle	A. T. Wanamaker	566	566	9,807	0	1	0	0	7/1	1	$75
State of Wisconsin General Hospital *[1]	Madison	F. A. Davis and W. M. Nesbit	1,016	.....	3,977	11	1	2	0	7/1	3	$25
Milwaukee County Hospital *[1]	Wauwatosa, Wis.	E. R. Ryan and E. A. Waldeck	1,965	1,965	24,577	5	2	4	0	7/1&7/15	1-2	$50

17. ORTHOPEDIC SURGERY

Revision of list is now taking place in collaboration with the American Board of Orthopaedic Surgery

Hillman Hospital *	Birmingham, Ala.	J. D. Sherrill	681	681	4,844	5	1	0	0	7/1	1	$50
Children's Hospital [1]	Los Angeles	J. C. Wilson	433	328	5,287	1	1	0	0	7/1	1-3	$90
Los Angeles County Hospital *[1]	Los Angeles	J. C. Wilson	4,182	.....	32,839	10	4	0	0	4/1&10/1	2-3	$10
Orthopaedic Hospital	Los Angeles	C. L. Lowman	2,040	.....	40,610	0	2	0	0	7/1	2-3	$50
White Memorial Hospital *	Los Angeles	G. M. Taylor	251	.....	5,750	..	..	..	..	.....	.....	.....
Hospital for Children *[2]	San Francisco	L. Abbott	329	139	1,891	0	1	1	0	7/1	1	$25
San Francisco Hospital *[1]	San Francisco	F. C. Bost	.....	.....	.....	..	0	0	1	7/1	1	$50
Shriners Hospital for Crippled Children	San Francisco	S. L. Haas	379	321	3,448	0	1	0	0	7/1	1	$50
University of California Hospital *[1]	San Francisco	H. C. Naffziger	368	196	7,789	..	0	2	0	7/1	1+	$25
Children's Hospital	Denver	.....	661	661	.....	..	1	2	0	7/1	1-2	$50
New Haven Hospital *[1]	New Haven, Conn.	A. Bassin	.....	.....	16,463	2	1	0	0	7/1	1+	[a]
Central Dispensary and Emergency Hosp.*	Washington, D. C.	G. W. Leadbetter	1,461	.....	2,408	18	1	0	0	6/15	1	$75
Children's Memorial Hospital [1]	Chicago	F. A. Chandler	.....	.....	3,390	..	1	0	0	7/1	1	$50
Cook County Hospital *[1]	Chicago	D. H. Levinthal	942	942	19,351	0	2	0	0	1/1&7/1	2	$25
Michael Reese Hospital *[1]	Chicago	D. H. Levinthal	760	170	409	..	1	0	0	7/1	1-2	$50
Research and Educational Hospital *	Chicago	H. B. Thomas	425	425	.....	0	3	0	0	7/1	1-3	$50
Shriners Hospital for Crippled Children	Chicago	B. H. Moore	289	289	2,269	0	1	1	0	7/1	1	$65
University of Chicago Clinics *	Chicago	H. O. Mitchell	596	596	6,269	1	3	1	1	7/7	1-3	None
Indiana University Medical Center *[1]	Indianapolis	L. A. Ensminger	1,322	1,322	12,363	2	2	1	0	7/1	1-3	$63
University Hospitals *[1]	Iowa City	A. Steindler	3,995	3,795	7,081	6	1	7	0	7/1	1-6	$21
Kosair Crippled Children's Hospital	Louisville, Ky.	W. B. Owen	919	919	734	0	1	1	0	7/1	1	$25
Louisville City Hospital *	Louisville, Ky.	W. B. Owen	1,095	1,095	7,148	13	1	0	0	7/1	1	$50
Charity Hospital *[1]	New Orleans	H. T. Simon and G. Caldwell	3,546	3,546	25,642	7	7	3	0	7/1	1-3	$25
Shriners Hospital for Crippled Children	Shreveport, La.	H. A. Durham	200	200	1,165	0	1	0	0	Varies	1	$25
James Lawrence Kernan Hospital for Crippled Children	Baltimore	A. F. Voshell	267	255	6,004	0	1	0	0	7/1	1	$92
Johns Hopkins Hospital *	Baltimore	G. E. Bennett	602	413	17,639	3	1	1	0	7/1&9/1	1-4	None
Boston City Hospital *[1]	Boston	O. J. Hermann	1,516	1,516	8,685	7	1	1	0	Varies	1+	None
Children's Hospital	Boston	F. R. Ober	477	380	11,170	..	1	0	0	9/1	1	$30
Lahey Clinic	Boston	G. E. Haggart	500	.....	6,000	..	0	0	1	7/1	1-3	$100[c]
Massachusetts General Hospital *[1]	Boston	S. M. Smith-Petersen	763	.....	18,665	1	1	0	0	7/1	1	$42
Shriners Hospital for Crippled Children	Springfield, Mass.	R. N. Hatt	402	342	2,973	0	1	0	0	7/1	1	$25
University Hospital *[1]	Ann Arbor, Mich.	C. E. Badgley	1,960	.....	9,720	5	2	5	0	7/1	1-5	$25
Henry Ford Hospital *	Detroit	C. L. Mitchell	888	.....	12,565	1	1	1	0	9/1	2-3	$130[c]
Mayo Foundation	Rochester, Minn.	(See page 788)										
Gillette State Hospital for Crippled Children	St. Paul	C. C. Chatterton	815	.....	8,348	6	0	0	3	1/1&7/1	1	$50
State Hospital for Crippled Children	Columbia, Mo.	W. J. Stewart	607	607	1,295	2	1	0	0	7/1	1	$50
Kansas City General Hospital *	Kansas City, Mo.	P. D. Dickson	635	635	4,670	33	1	0	0	7/1	1	$50
St. Luke's Hospital *	Kansas City, Mo.	F. D. Dickson	790	790	4,980	5	1	0	0	7/1	1-2	$50
St. Mary's Group of Hospitals *	St. Louis	A. O'Reilly	368	266	4,831	1	0	0	3	7/1	3	$25
Shriners Hospital for Crippled Children	St. Louis	H. H. Beckering	435	435	1,944	0	1	0	0	7/1	1-2	Varies
Nebraska Orthopedic Hospital [1]	Lincoln	H. W. Orr	954	871	1,960	8	1	0	0	11/1	1-2	$80
Jersey City Hospital *	Jersey City, N. J.	.....	1,048	944	14,899	8	1	2	0	1/1&7/1	1+	$75
Hospital and Home for Crippled Children	Jersey City, N. J.	J. E. Toye	474	299	7,660	0	1	0	0	7/1	1	$100
New Jersey Orthopaedic Hospital and Dispensary	Orange	H. W. Smith	466	295	24,647	1	1	2	0	1/1&7/1	1½	$50
Kings County Hospital *	Brooklyn	J. B. L'Episcopo	845	845	13,926	3	1	1	0	7/1	2	$18
Long Island College Hospital *	Brooklyn	J. B. L'Episcopo	406	298	12,766	1	1	1	0	7/1	2-3	$23
Buffalo General Hospital *	Buffalo	W. W. Plummer	671	322	1,725	1	1	0	0	7/1	1-2	$25
Bellevue Hospital *[1]	New York City	A. Krida	278	278	9,121	0	4	0	0	1/1&7/1	2	$15
Hospital for Joint Diseases *	New York City	.....	2,918	1,637	40,546	11	13	0	2	7/1	1-3	$25
Hospital for Special Surgery	New York City	P. B. Wilson	1,353	772	56,883	5	2	6	6	1/1&7/1	1-2	$30
Metropolitan Hospital *[1]	New York City	M. J. Wilson	897	897	2,912	2	1	0	0	7/1	1+	$75
Mount Sinai Hospital *[1,10]	New York City	.....	.....	.....	14,149	..	1	0	0	7/1	1	$50
New York Orthopaedic Dispensary and Hospital	New York City	A. De F. Smith	1,758	1,758	94,319	2	8	0	3	Quart.	2-3	$33
St. Luke's Hospital *	New York City	M. Cleveland	354	244	5,247	2	1	0	0	7/1	3	$25
Strong Memorial and Rochester Municipal Hospitals *	Rochester, N. Y.	R. P. Schwartz	635	476	7,323	..	1	0	0	7/1	1-2	$67
Sea View Hospital [1,21]	Staten Island, N. Y.	D. Bosworth	268	268	.....	14	2	1	0	1/1&7/1	1	$100
New York State Reconstruction Home	W. Haverstraw, N. Y.	D. De F. Smith	175	175	804	0	1	1	0	3/1&9/1	2	$100
Duke Hospital *[1]	Durham, N. C.	L. D. Baker	595	498	5,643	4	1	1	2	7/1	1-3	None
Cincinnati General Hospital *	Cincinnati	J. Freiberg	334	334	7,185	2	1	1	0	7/1	1-2	[a]
Cleveland Clinic Foundation Hospital	Cleveland	J. A. Dickson	438	.....	.....	2	0	0	3	7/1	1-3	$55
Mount Sinai Hospital *[1]	Cleveland	R. Reich	818	316	7,214	..	1	0	0	7/1	1	$60
University Hospitals *[1]	Cleveland	M. Harbin	562	422	7,369	1	1	0	0	7/1	2	$25
Bone and Joint Hospital and McBride Clinic	Oklahoma City	E. D. McBride	698	698	21,895	0	1	0	0	1/1	2	$50
St. Anthony Hospital *	Oklahoma City	W. K. West	752	92	.....	1	1	0	0	7/1	1	$50
University Hospitals *	Oklahoma City	P. Colonna	1,530	1,232	9,137	9	3	0	2	7/1	1-3	$60
Mercy Hospital for Crippled Children	Tulsa, Okla.	W. Sisler	1,095	.....	5,405	0	1	0	0	7/1	1-2	$30
Emanuel Hospital *[1]	Portland, Ore.	R. B. Dillehunt	900	.....	2	8	1	0	0	7/1	1	$40
Shriners Hospital for Crippled Children	Portland, Ore.	R. B. Dillehunt	322	322	2,224	1	1	0	0	7/1	1	$40
State Hospital for Crippled Children	Elizabethtown, Pa.	T. Outland	289	289	723	2	3	0	0	9/1	2	$100
Temple University Hospital *[1]	Philadelphia	J. R. Moore	629	629	5,002	1	3	0	0	9/1	3	$40
Robert Packer Hospital *	Sayre, Pa.	P. Harmon	764	746	4,868	16	0	0	2	9/1	2-3	$50
Willis C. Campbell Clinic	Memphis, Tenn.	W. C. Campbell	1,098	.....	9,209	6	7	0	7	1/1&7/1	3	$50
Parkland Hospital *[1]	Dallas, Tex.	P. M. Girard	534	.....	3,904	3	1	0	0	7/1	1	$25
Texas Scottish Rite Hospital for Crippled Children [1]	Dallas, Tex.	W. B. Carrell	700	700	3,782	0	1	0	0	7/1	1	$100
University of Virginia Hospital *	Charlottesville	R. V. Funsten	625	625	4,154	4	1	1	0	7/1	1	$33
Children's Orthopedic Hospital [1]	Seattle	H. J. Wyckoff	485	.....	4,874	2	1	0	0	7/1	1	$100
State of Wisconsin General Hospital *[1]	Madison	R. E. Burns	1,978	.....	.....	6	2	4	0	7/1	3	$25
Milwaukee County Hospital *[1]	Wauwatosa, Wis.	C. C. Schneider	1,259	1,259	11,231	5	1	1	0	7/1&7/15	1	$50

Numerical and other references will be found on page 788.

18. OTOLARYNGOLOGY

		Chief of Service	Inpatients Treated[a]	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Children's Hospital[1]	Los Angeles	J. M. Brown	1,335	1,163	4,422	2	1	0	0	7/1	1-3	$90
Los Angeles County Hospital *[1]	Los Angeles	J. M. Brown	2,345	2,345	14,987	20	3	0	0	7/1	2	$10
White Memorial Hospital *	Los Angeles	B. N. Colver	1,157	.....	11,322	1	2	0	0	7/1	1-3	$80
San Francisco Hospital *[1]	San Francisco		642[b]	642[b]			2	0	0	7/1	1	$50
Stanford University Hospitals *[1]	San Francisco	J. Bacher	1,146	655	11,612	..	1	1	0	7/1	1-2	$25
University of California Hospital *[1]	San Francisco	H. C. Naffziger	702	595	8,681	1	0	1	0	7/1	1+	$25
New Haven Hospital *[1]	New Haven, Conn.	N. Canfield	.....	.....	5,701	6	1	1	0	7/1	1+	*
Episcopal Eye, Ear and Throat Hospital	Washington, D. C.		6,230[b]	2,056[b]	59,471[b]	..	3	0	0	3/1,7/1,11/1	1	None
Cook County Hospital *[1]	Chicago	J. Lifschutz	6,709	6,709	11,612	14	5	0	0	1/1&7/1	1½	$25
Illinois Eye and Ear Infirmary[1]	Chicago	H. S. Gradle	2,886	2,886	130,457	3	3	6	0	1/1&7/1	1	None
Michael Reese Hospital *[1]	Chicago	J. F. Strauss	2,439	284	378	5	1	0	0	7/1	1	$50
Passavant Memorial Hospital *[1]	Chicago	J. F. Delph	256	23	4,959	0	1	0	0	7/1	1	None
Presbyterian Hospital *	Chicago	D. B. Hayden	1,786	22		3	2	0	0	1/1&7/1	1	$50
Research and Educational Hospital *	Chicago	F. Lederer	697	697	.....	6	1	0	0	7/1	1-2	$50
University of Chicago Clinics *	Chicago	J. R. Lindsay	721	.....	12,020	4	1	2	2	7/1	1-2	None
Indianapolis City Hospital *	Indianapolis	R. Dearmin	1,587	1,587	7,301	6	1	1	0	7/1	2	$42
Indiana University Medical Center *[1]	Indianapolis	C. H. McCaskey	701	701	2,247	2	1	1	0	7/1	1-2	$83
University Hospitals *[1]	Iowa City	D. M. Lierle	2,093	1,988	6,671	7	1	3	0	7/1	1-6	$21
Eye, Ear, Nose and Throat Hospital	New Orleans	F. E. Le Jeune	3,175	.....	32,789	8	6	6	0	7/1	2	None
Johns Hopkins Hospital *	Baltimore	S. J. Crowe	1,285	915	15,307	1	1	2	0	7/1&9/1	1-4	None
Beth Israel Hospital *	Boston	L. Arkin and L. M. Freedman	981	472	5,601	..	1	0	0	7/1	1	None
Lahey Clinic	Boston	W. B. Hoover	500	.....	10,000	..	0	0	1	7/1	1-2	$100[c]
Massachusetts Eye and Ear Infirmary	Boston	L. A. Schall	4,179	3,274	43,048	8	7	0	0	Quart.	1¾	None
Memorial Hospital *	Worcester, Mass.	G. Derry	1,445	1,445	3,638	2	1	0	0	7/1	1	$42
University Hospital *[1]	Ann Arbor, Mich.	A. C. Furstenberg	1,075	.....	9,246	6	1	2	0	7/1	1-4	$25
Henry Ford Hospital *	Detroit	J. L. Dill	456	.....	17,514	2	1	2	0	9/1	3	$130[c]
University Hospitals *[1]	Minneapolis	H. Newhart	275	.....	5,334	3	0	0	2	7/1	3	$50
Barnes Hospital *	St. Louis	T. Walsh	1,225	.....	17,580	8	0	7	0	7/1	1-3	$25
Jewish Hospital *	St. Louis	S. B. Westlake	435	94	1,870	..	1	0	0	7/1	1+	$70
St. Louis City Hospital *	St. Louis	A. C. Stutsman	769	769	8,611	11	1	0	0	7/1	1-2	$100
St. Mary's Group of Hospitals *	St. Louis	W. E. Sauer	977	610	5,018	1	1	0	0	7/1	3	$25
Newark City Hospital *[3,4]	Newark, N. J.	W. P. Eagleton	2,893	2,893	.....	..	1	0	0	10/1	1	$20
Albany Hospital *	Albany, N. Y.	H. K. Tebbutt, Jr.	1,030	430	3,157	3	1	0	0	7/1	1	$25
Brooklyn Eye and Ear Hospital	Brooklyn		5,522	5,522	59,666	4	8	0	0	Quart.	2	None
Jewish Hospital *[1]	Brooklyn	E. L. Berger	596	.....	5,964	..	1	0	0	7/1	1	$25
Kings County Hospital *	Brooklyn	M. C. Myerson	3,002	3,002	13,569	13	1	2	0	1/1&7/1	2	$18
Long Island College Hospital *[1]	Brooklyn	R. C. Moorhead	726	655	5,437	2	1	0	0	7/1	2	$25
Buffalo General Hospital *	Buffalo	J. F. Fairbairn	1,110	530	3,470	2	1	1	0	7/1	1-2	$25
Edward J. Meyer Memorial Hospital *	Buffalo	J. F. Fairbairn	616	616	7,604	6	1	2	0	7/1	3-4	$50[c]
Queens General Hospital *[1]	Jamaica, N. Y.	M. S. Bender	2,057	2,057	7,410	9	1	1	0	7/1	1	$18
Bellevue Hospital *[1]	New York City	J. W. Fowlkes	3,240	3,240	20,928	7	4	0	0	1/1&7/1	2	Varies
Flower and Fifth Avenue Hospitals *	New York City	J. H. Hetrick	701	511	4,807	1	1	0	0	7/1	2	$25
Harlem Hospital *[1]	New York City	H. J. Burman	1,400	1,400	15,803	2	1	0	0	7/1	1	$18
Manhattan Eye, Ear and Throat Hospital	New York City		13,715	11,388	78,728	6	8	0	0	Quart.	2	None
Metropolitan Hospital *[1]	New York City	J. A. W. Hetrick	1,058	1,058	5,737	3	1	0	0	7/1	1+	$100
Mount Sinai Hospital *[1,10]	New York City		.....	.....	10,421	..	1	0	0	7/1	2	$50
New York City Hospital *	New York City	H. B. Judd	1,133	1,133	3,007	0	1	0	0	7/1	1	$100
New York Eye and Ear Infirmary	New York City		3,093	.....	43,649	3	8	0	0	Quart.	3	None
Presbyterian Hospital *[1]	New York City	J. D. Kernan	1,638	1,178	29,386	..	1	5	0	1/1&7/1	3	None
Roosevelt Hospital *	New York City	C. N. Harper	926	754	7,188	..	1	0	0	7/1	2	None
St. Luke's Hospital *	New York City	W. C. Bowers	1,215	823	10,827	1	1	3	0	7/1	3	$25
Strong Memorial and Rochester Municipal Hospitals *	Rochester, N. Y.	C. A. Heatly	1,035	776	6,412	..	1	1	0	7/1	2	$42
Sea View Hospital[1,11]	Staten Island, N. Y.	M. C. Myerson	3,032	3,032	.....	..	2	0	0	1/1&7/1	1-2	$100
Grasslands Hospital *	Valhalla, N. Y.	M. T. Smith	395	395	3,218	5	1	0	0	7/1	1-2	$75
Cincinnati General Hospital *	Cincinnati	S. Iglauer	1,548	1,548	7,164	2	1	1	0	7/1	1-2	*
City Hospital *	Cleveland	C. W. Engler	1,110	1,110	6,429	3	1	1	0	7/1	1-2	$40
Cleveland Clinic Foundation Hospital	Cleveland	P. M. Moore	314	.....	.....	3	0	0	3	7/1	1-3	$55
St. Luke's Hospital *	Cleveland	W. H. Tuckerman	1,531	493	4,073	3	1	1	0	6/25	2	$25
University Hospitals *[1]	Cleveland	C. Pitkin	2,175	1,264	11,636	3	1	2	0	Varies	2	$25
University of Oregon Medical School Hospitals and Clinics *	Portland	R. A. Fenton	376	376	10,567	4	1	0	0	7/1	1	$40
George F. Geisinger Memorial Hospital *	Danville, Pa.	F. W. Davison	733	.....	5,334	3	1	0	0	7/1	1	$50
Graduate Hospital of the University of Pennsylvania *	Philadelphia		1,929	1,929	8,007	4	2	0	0	7/1	1	None
Jefferson Medical College Hospital *	Philadelphia	L. H. Clerf and H. J. Williams	1,312	.....	10,563	0	1	0	0	9/1	1	$50
Temple University Hospital *[1]	Philadelphia	R. F. Ridpath and M. S. Ersner	1,152	1,152	4,226	1	1	0	0	9/1	3	$40

19. PATHOLOGY

Revision of list is now taking place in collaboration with the American Board of Pathology

		Chief of Service	Inpatients Treated*	Surgical Specimens	Number Examined Microscopically	Autopsy Percentage	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Hillman Hospital *	Birmingham, Ala.	G. S. Graham	11,293	4,011	2,617	25	1	0	0	7/1	1	$50
Cedars of Lebanon Hospital *	Los Angeles	A. H. Zeller and L. J. Tragerman	8,313	3,684	2,691	41	1	0	0	7/1	1	$75
Children's Hospital[1]	Los Angeles	A. Wright	4,754	362	353	91	1	0	0	7/1	1-3	$90
Los Angeles County Hospital *[1]	Los Angeles	N. G. Evans	48,902	8,992	.....	57	5	0	0	1/1&7/1	2-3	$10
St. Vincent's Hospital *	Los Angeles	J. E. Kahler	6,292	2,673	1,600	40	..	..	..	.....	..	.....
White Memorial Hospital *	Los Angeles	O. B. Pratt	7,317	4,695	3,369	41	1	0	0	7/1	1	$80
Highland-Alameda County Hospital *[1]	Oakland, Calif.	G. Moore	12,797	4,470	2,642	58	1	1	0	7/1	1-3	$40
Collis P. and Howard Huntington Memorial Hospital *	Pasadena, Calif.	A. G. Foord	5,958	2,145	1,309	53	1	0	0	7/1	3	$100
French Hospital *	San Francisco	D. A. Wood	3,788	696	563	48	1	0	0	7/1	1	$50
Mount Zion Hospital *	San Francisco	G. Y. Rusk	3,980	1,586	942	60	0	1	0	6/15	1	$50
San Francisco Hospital *[1]	San Francisco	G. Y. Rusk and W. Dock	16,355	2,279	2,279	56	3	0	1	7/1	1	$50
Stanford University Hospitals *[1]	San Francisco	W. Dock	9,736	3,807	3,021	53	0	2	0	7/1	1	$25
University of California Hospital *[1]	San Francisco	C. L. Connor	7,608	2,813	2,813	67	1	0	0	7/1	1+	$25
Denver General Hospital *	Denver	F. Mayner	7,416	3,224	2,532	41	1	0	0	7/1	1	$50
St. Francis Hospital *	Hartford, Conn.	L. P. Hastings	10,632	2,317	2,200	22	1	0	0	7/1	1	$10
New Haven Hospital *[1]	New Haven, Conn.	M. C. Winternitz	10,263	3,089	3,089	59	1	1	0	7/1	1+	*

Numerical and other references will be found on page 788.

19. PATHOLOGY—(Continued)

	Chief of Service	Inpatients Treated	Surgical Specimens Examined	Specimens Examined Microscopically	Autopsy Percentage	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Months)	Beginning Stipend
Children's Hospital	Washington, D. C. J. W. Lindsay and E. C. Rice	6,385	146	32	72	1	0	0	7/1	1	$50
Gallinger Municipal Hospital*	Washington, D. C. E. R. Whitmore	15,881	1,961	1,668	40	0	1	0	7/1	1	$25
Garfield Memorial Hospital*	Washington, D. C. J. W. Lindsay	10,834	2,692	900	59	1	1	0	7/1	1	$50
Georgetown University Hospital*	Washington, D. C. V. Dardinski	5,919	1,294	421	44	1	0	3	7/1	1	$50
George Washington University Hospital*	Washington, D. C. R. M. Choisser	2,659	610	610	44	1	0	2	7/1&9/1	1-2	$75
Sibley Memorial Hospital*	Washington, D. C. O. B. Hunter	8,083	2,502	641	43	1	0	0	7/1	1	$55
Grady Hospital*	Atlanta, Ga. R. Mosteller	21,077	6,491	6,491	38	2	0	0	7/1	1+	$20
University Hospital*[1]	Augusta, Ga. E. R. Pund	8,495	2,295	1,883	35	1	0	0	7/1	1	$25
Emory University Hospital*	Emory University, Ga. R. R. Kracke	6,495	1,694	1,694	52	1	0	0	7/1	1-2	$50
Children's Memorial Hospital[1]	Chicago W. G. Hibbs	4,162	562	365	62	1	0	0	7/1	1	f
Cook County Hospital*[1]	Chicago W. Schiller	81,154	8,456	5,974	20	3	0	21	1/1&7/1	1-3	$25
Michael Reese Hospital*[1]	Chicago O. Saphir	17,609	3,913	3,913	60	2	0	0	1/1&7/1	1-2	$50
Mt. Sinai Hospital*[1]	Chicago I. Davidsohn	6,157	3,274	2,335	51	1	1	0	7/1	1	$35
Passavant Memorial Hospital*[1]	Chicago F. B. Queen	5,257	989	977	70	1	0	0	Fall	1	None
Presbyterian Hospital*	Chicago G. Apfelbach	11,617	5,046	3,046	64	2	0	0	Varies	1	$50
Provident Hospital*	Chicago J. H. Lewis	3,569	760	760	47	1	0	0	7/1	1-3	$50
Research and Educational Hospital*	Chicago S. A. Levinson	5,475	4,573	4,573	86	2	0	0	7/1	1	$50
St. Luke's Hospital*[1]	Chicago E. F. Hirsch	12,138	4,923	3,903	71	1	0	2	7/1	1-5	$25
University of Chicago Clinics*	Chicago P. R. Cannon	10,844	2,918	1,723	78	1	0	0	7/1	1-2	$25
Evanston Hospital*	Evanston, Ill. E. L. Benjamin	8,291	1,806	1,806	79	1	0	0	10/1	1	$50
St. Francis Hospital*	Evanston, Ill. O. T. Schultz	6,263	2,224	475	47	1	0	0	7/1	1	$50
Methodist Hospital of Central Illinois*	Peoria, Ill. M. G. Bohrod	5,510	2,281	1,848	42	1	0	0	7/1	1	$25
St. Francis Hospital*[1]	Peoria, Ill. E. J. Kraus	10,820	2,351	2,351	29	1	0	0	7/1	1	$50
Indianapolis City Hospital*	Indianapolis C. V. Thornton	11,530	3,354	3,304	56	1	0	0	7/1	1	$42
Indiana University Medical Center*[1]	Indianapolis F. Forry	9,359	3,245	3,220	52	1	3	1	7/1	1-3	$63
Methodist Hospital*	Indianapolis H. M. Banks	17,033	4,864	4,864	24	3	0	0	7/1	1-2	$50
Ball Memorial Hospital*	Muncie, Ind. L. G. Montgomery	4,878	2,482	2,269	46	1	0	0	7/1	1+	$75
Epworth Hospital*[2]	South Bend, Ind. A. S. Giordano	16,823	2,957	1,251	38	1	0	0	7/1	1+	$100
University Hospitals*[1]	Iowa City S. Smith	18,551	2,855	2,855	55	1	0	0	7/1	1-6	$21
University of Kansas Hospitals*	Kansas City, Kan. H. R. Wahl	6,015	3,536	3,473	68	1	2	0	7/1	1-3	$50
St. Francis Hospital*	Wichita, Kan. C. A. Hellwig	6,425	3,145	3,145	47	1	0	0	7/15	1	$100
Louisville City Hospital*	Louisville, Ky. A. J. Miller	12,422	2,035	2,029	40	1	1	0	7/1	1-2	$14
Charity Hospital*	New Orleans E. S. Moss	37,504	11,206	11,206	47	0	2	0	7/1	1-3	$25
Touro Infirmary*	New Orleans S. H. Colvin, Jr.	11,818	2,942	2,942	71	2	0	0	7/1	1	$25
Baltimore City Hospitals*	Baltimore F. B. Kindell	8,369	1,153	1,145	47	1	1	0	7/1	1	$12
Johns Hopkins Hospital*	Baltimore W. G. MacCallum	16,141	3,831	3,831	73	1	2	0	7/1&9/1	1+	None
Boston City Hospital*	Boston F. Parker, Jr.	44,575	4,440	4,440	47	5	0	0	Varies	1+	None
Boston Lying-In Hospital[16,29]	Boston A. T. Hertig	5,925	4,145	4,145	69	1	0	0	1/1&7/1	1	$50
Children's Hospital	Boston S. B. Wolbach	5,808	708	708	69	1	0	0	7/1	1	$50
Massachusetts General Hospital*	Boston T. B. Mallory	7,591	7,150	7,150	63	1	0	0	7/1	1	$42
Massachusetts Memorial Hospitals*[1]	Boston C. F. Branch	6,935	1,540	1,540	76	1	0	2	7/1	1-2	...
New England Deaconess Hospital[17]	Boston S. Warren	7,778	5,345	5,335	48	1	2	0	7/1	1-2	$75
Peter Bent Brigham Hospital*	Boston S. B. Wolbach	5,348	1,972	1,343	63	1	0	1	2/1&7/1	1-3	$12
Worcester City Hospital*[1]	Worcester, Mass. R. H. Goodale	10,321	3,540	3,100	34	1	0	0	7/1	1	None
Worcester State Hospital[1,33]	Worcester, Mass. W. Freeman	777	58	58	65	2	0	0	1/1&7/1	1	None
University Hospital*[1]	Ann Arbor, Mich. C. V. Weller	16,225	6,426	6,426	66	0	1	0	7/1	1	$25
City of Detroit Receiving Hospital*[1,19]	Detroit A. A. Brines	18,826	2,746	.....	39	0	1	0	7/1	1	$75[g]
Harper Hospital*	Detroit P. F. Morse	17,677	.....	.....	36	0	1	0	7/1	1	$50
Henry Ford Hospital*	Detroit F. W. Hartman	12,800	3,774	3,774	57	2	0	1	7/1	1-3	$130[g]
Providence Hospital*	Detroit D. H. Kaump	10,580	3,309	3,309	53	1	0	0	7/1	1	$100
Woman's Hospital*	Detroit D. C. Beaver	7,329	3,387	3,408	53	1	0	0	7/1	1	...
Eloise Hospital and Infirmary*	Eloise, Mich. S. E. Gould	9,024	1,443	1,443	38	1	1	1	7/1	1-2	$50
Hurley Hospital*	Flint, Mich. G. R. Backus	10,787	4,556	.....	34	1	0	0	7/1	1	$12
St. Luke's Hospital*	Duluth, Minn. A. H. Wells	6,786	1,735	1,690	68	1	0	0	7/1	1-3	$20
Mayo Foundation	Rochester, Minn. (See page 788)										
Ancker Hospital*	St. Paul J. F. Noble	10,948	1,440	1,208	69	1	0	0	7/1	1	$50
Kansas City General Hospital*	Kansas City, Mo. V. Buhler	11,254	2,282	2,140	78	2	0	0	7/1	1-3	$80
St. Joseph Hospital*	Kansas City, Mo. R. W. Kerr	6,864	3,691	2,271	74	1	0	0	7/1	1-3	$50
St. Luke's Hospital*	Kansas City, Mo. F. C. Helwig	5,676	3,380	2,984	76	1	0	0	7/1	1-2	$50
Barnes Hospital*	St. Louis R. A. Moore	10,305	2,015	2,015	64	1	0	0	7/1	1	$25
Jewish Hospital*	St. Louis S. H. Gray	6,944	1,549	1,549	35	0	1	0	7/1	1	$35
St. Louis City Hospital*	St. Louis S. H. Gray	16,178	2,479	2,479	48	1	0	0	7/1	1-2	$125
Creighton Memorial St. Joseph's Hospital*	Omaha B. C. Russum	8,386	7,360	5,554	29	1	0	0	7/1	1	$75
University of Nebraska Hospital*	Omaha J. P. Tollman	3,481	1,217	1,217	66	1	0	0	7/1	1-3	$50
Mary Hitchcock Memorial Hospital*	Hanover, N. H. E. Miller	4,686	554	709	78	1	1	0	7/1	1	$83
Newark Beth Israel Hospital*	Newark, N. J. W. Antopol	10,637	3,947	3,771	39	1	1	1	1/1	2	$25
Albany Hospital*[1]	Albany, N. Y. A. W. Wright	11,610	5,717	5,717	73	1	5	0	7/1	1	$75
Bender Hygienic Laboratory	Albany, N. Y. J. J. Clemmer	[e]	6,310	6,310	..	1	1	0	7/1	3-4	$100
Brooklyn Hospital*	Brooklyn J. A. de Veer	7,349	2,186	2,186	44	1	0	0	7/1	1	$50
Cumberland Hospital*	Brooklyn K. H. Rubeyes	7,367	1,692	1,692	56	1	0	0	7/1	1	$18
Israel Zion Hospital*	Brooklyn J. M. Ravid	10,187	2,364	2,364	28	1	0	0	1/1	1	$25
Jewish Hospital*[1]	Brooklyn M. Lederer	12,725	7,568	6,578	47	1	1	0	7/1	1	$75
Kings County Hospital*	Brooklyn W. W. Hala	57,696	13,439	13,439	23	1	4	0	7/1	1-2	$50
Long Island College Hospital*	Brooklyn J. R. Oliver	8,235	2,874	2,874	38	1	0	0	7/1	1	$45
St. John's Hospital*	Brooklyn J. Dorgelo	5,657	1,088	1,068	44	1	0	0	7/1	1	$25
Buffalo General Hospital*	Buffalo S. Tretjan	13,700	3,600	3,600	43	2	0	0	7/1	1-2	$25
Edward J. Meyer Memorial Hospital*	Buffalo W. F. Jacobs	9,872	2,526	2,526	33	1	3	0	7/1	3-4	$75
Millard Fillmore Hospital*	Buffalo N. Elton	7,756	4,080	4,279	44	1	0	0	7/1	1	$25
Meadowbrook Hospital*	Hempstead, N. Y. T. J. Curphey	5,850	1,771	1,729	53	2	0	0	7/1	1	$50
Queens General Hospital*[1]	Jamaica, N. Y. A. A. Angrist	13,963	2,892	2,892	67	1	1	0	7/1	1	$18
Fordham Hospital*	New York City L. R. Ferraro	12,675	2,252	2,000	38	1	0	0	7/1	1	$18
Harlem Hospital*[1]	New York City S. Weichbrod	20,350	2,780	2,780	36	1	1	1	1/1&7/1	1	$18
Lenox Hill Hospital*	New York City G. L. Rohdenburg	10,384	2,006	2,006	58	1	0	0	7/1	1	None
Lincoln Hospital*	New York City C. Brown	10,582	1,984	1,975	31	2	0	0	7/1	1+	$18
Metropolitan Hospital*[1]	New York City A. Saccone	12,050	1,421	1,400	34	1	0	0	7/1	1+	$70
Montefiore Hospital for Chronic Diseases*[1]	New York City D. Marine	1,787	585	385	71	1	0	0	7/1	1	$50
Morrisania City Hospital*	New York City W. Aronson	12,543	1,908	1,908	31	1	0	0	1/1	1	$8
Mount Sinai Hospital*[1,19]	New York City D. Klemperer	16,984	6,711	6,711	48	0	2	0	1/1&7/1	1	None
New York City Hospital*	New York City J. R. Lisa	10,590	1,581	1,206	42	1	0	1	7/1	1	$100
New York Hospital*	New York City E. Opie	16,412	5,000	3,838	64	1	0	0	7/1	1-2	$25
New York Post-Graduate Medical School and Hospital*	New York City M. N. Richter	9,139	5,800	.....	37	1	2	0	1/1&7/1	1	None
Presbyterian Hospital*[1]	New York City J. W. Jobling	18,017	3,785	3,370	49	1	0	0	7/1	1	None
Roosevelt Hospital*[1]	New York City W. W. Brandes	7,309	2,065	2,065	45	1	0	0	7/1	1-2	$12
St. Luke's Hospital*[1]	New York City F. C. Wood	8,515	2,403	2,403	51	1	0	0	7/1	1-2	$100
St. Vincent's Hospital*	New York City A. Rottino	9,264	1,556	1,556	39	1	0	0	1/1&7/1	1	None
Sydenham Hospital*	New York City A. M. Ginzler	4,284	1,410	1,141	53	1	0	0	7/1	1+	None
Willard Parker Hospital*	New York City V. B. Dolgopol	6,955	31	31	49	1	0	0	7/1	1	$100
Rochester General Hospital*	Rochester, N. Y. I. Gaspar	8,127	6,128	5,209	61	1	0	0	7/1	1	$50

Numerical and other references will be found on page 788.

19. PATHOLOGY—(Continued)

	Chief of Service	Inpatients Treated[3]	Surgical Specimens	Number Examined Microscopically	Autopsy Percentage	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Strong Memorial and Rochester Municipal Hospitals *	Rochester, N. Y.	G. H. Whipple	14,494	3,226	3,226	73	2	1	2	7/1	1-2	$42
Grasslands Hospital *	Valhalla, N. Y.	G. Dahldorf	5,336	1,872	1,779	64	2	0	0	1/1&7/1	1	$118
Duke Hospital *[1]	Durham, N. C.	W. D. Forbus	11,880	14,166	14,166	60	0	1	6	7/1	1-3	None
Christ Hospital *	Cincinnati	J. W. Leichliter	8,468	1,393	1,326	40	1	0	0	6/25	1	$75
Cincinnati General Hospital *[1]	Cincinnati	R. S. Austin	16,248	2,241	2,241	51	6	0	0	7/1	1-2+	[8]
City Hospital *	Cleveland	H. T. Karsner	12,652	2,730	1,778	44	1	4	0	7/1	1-3	$65
Mount Sinai Hospital *[1]	Cleveland	B. S. Kline	8,044	2,395	2,395	35	1	0	1	7/1	1-2	$50
St. Luke's Hospital *	Cleveland	R. Dominguez	10,074	2,088	2,460	43	1	1	0	7/1	2	$50
St. Vincent Charity Hospital *	Cleveland	D. J. Rehbock	7,190	1,386	1,357	36	1	0	0	7/1	1	$50
University Hospitals *[2]	Cleveland	H. Karsner	18,902	4,057	4,057	66	1	1	0	7/1	2	$25
Starling-Loving University Hospital *[1]	Columbus, O.	L. L. Rinehart	6,491	2,328	2,229	62	1	1	0	7/1	1	$25
White Cross Hospital *	Columbus, O.	R. S. Fife	2,092	1,344	.....	41	1	0	0	7/1	1	$25
Miami Valley Hospital *	Dayton, O.	W. M. Simpson	10,317	4,447	4,447	33	1	0	0	7/1	1+	$75
Youngstown Hospital *	Youngstown, O.	G. B. Kramer	12,393	3,711	3,041	32	1	0	0	7/1	1	$50
University Hospitals *	Oklahoma City	H. G. Jeter	5,420	2,131	1,712	56	1	0	1	7/1	1+	$50
St. Vincent's Hospital *	Portland, Ore.	T. D. Roberson	9,349	4,465	3,153	50	1	0	0	6/15	1	$25
University of Oregon Medical School Hospitals and Clinics *	Portland	F. R. Menne	8,819	1,836	1,836	58	5	0	0	7/1	1	$40
Abington Memorial Hospital *	Abington, Pa.	J. Eiman	6,311	1,978	1,939	56	1	0	0	10/1	1-2	$100
George F. Geisinger Memorial Hospital *	Danville, Pa.	H. F. Hunt	5,094	1,401	1,352	44	1	0	0	7/1	1	$50
Pittsburgh City Home and Hospitals [1]	Mayview, Pa.	G. H. Fetterman	1,659	183	183	20	1	1	0	9/1	1	$150
Germantown Dispensary and Hospital *	Philadelphia	F. B. Lynch Jr.	6,720	1,364	737	36	1	0	0	8/1	1-3	$125
Graduate Hospital of the University of Pennsylvania *	Philadelphia	E. A. Case	6,522	1,817	1,815	50	1	0	0	7/1	1	None
Hahnemann Hospital *	Philadelphia	S. W. Sappington	12,552	2,826	2,839	49	0	1	0	9/1	1	$50
Hosp. of the University of Pennsylvania *	Philadelphia	E. B. Krumbhaar	10,389	3,814	3,198	56	1	0	1	7/1	1	None
Jewish Hospital *[1]	Philadelphia	E. Steinfield	8,073	2,190	2,100	69	1	0	0	6/15	1-2	None
Mount Sinai Hospital *[1]	Philadelphia	D. R. Meranze	6,802	2,100	2,100	50	1	0	0	6/15	1-2	$25
Pennsylvania Hospital *	Philadelphia	J. T. Bauer	8,502	1,936	1,936	60	2	0	0	7/1&9/1	1-2	$30
Philadelphia General Hospital *[1]	Philadelphia	J. H. Clark	26,004	3,015	2,908	69	2	0	1	7/1&8/1	1-2	$50
Presbyterian Hospital *	Philadelphia	R. P. Custer	4,083	1,302	1,302	82	1	0	0	6/1	3	$50
Temple University Hospital *[1]	Philadelphia	L. W. Smith	10,042	16,950	16,950	69	2	0	0	9/1	3	$40
Allegheny General Hospital *	Pittsburgh	S. R. Haythorn	9,332	1,996	1,996	34	2	0	0	9/1	1	$85
Children's Hospital [1]	Pittsburgh	M. Menten	3,901	137	137	45	0	1	0	9/1	1	$35
Elizabeth Steel Magee Hospital	Pittsburgh	M. Cohen	6,381	1,778	1,778	32	2	0	0	9/1	1	$42
Mercy Hospital *	Pittsburgh	H. H. Permar	12,843	3,356	3,188	37	2	0	1	9/1	1	$90
Montefiore Hospital *	Pittsburgh	K. Yardumian	6,203	1,534	1,534	44	1	0	0	9/1	1-3	$50
Presbyterian Hospital *	Pittsburgh	G. R. Lucy	3,205	888	.....	34	2	0	0	9/1	1-3	$42
St. Francis Hospital *	Pittsburgh	A. J. Brueckeu	12,708	4,271	2,229	21	4	0	0	9/1	1	$85
Western Pennsylvania Hospital *[1]	Pittsburgh	P. Gross	10,290	1,925	1,925	26	1	0	0	7/1	1	$75
Reading Hospital *	Reading, Pa.	E. D. Funk	5,642	2,150	1,378	63	1	0	0	9/1	1-2	$83
Rhode Island Hospital *	Providence	B. F. Clarke	8,721	2,711	2,711	62	1	0	0	7/1	1	$30
John Gaston Hospital *	Memphis, Tenn.	E. E. Schneiderser	13,639	2,518	2,518	25	1	1	0	7/1	1	$25
Nashville General Hospital *	Nashville, Tenn.	W. A. DeMonbreun	6,765	1,104	1,094	43	1	0	0	7/1	1	$50
Vanderbilt University Hospital *[1]	Nashville, Tenn.	E. W. Goodpasture	6,295	2,697	1,483	62	1	2	0	7/1	1+	$35
Baylor University Hospital *	Dallas, Tex.	G. T. Caldwell	11,821	4,297	4,269	31	1	0	0	7/1	1	$50
Parkland Hospital *[1]	Dallas, Tex.	A. B. Cairns	9,639	2,664	2,144	31	1	0	0	7/1	1	$25
Jefferson Davis Hospital *[1]	Houston, Tex.	S. G. Henderson	14,305	2,478	2,478	38	1	0	0	7/1	1	$50
Mary Fletcher Hospital *[10]	Burlington, Vt.	E. H. Buttles	10,579	1,733	1,385	37	0	0	1	7/1	1-2	$100
Medical College of Virginia, Hosp. Division *	Richmond	F. L. Apperly	10,142	4,239	4,135	37	0	1	0	7/1	1	$13
Charleston General Hospital *	Charleston, W. Va.	W. Putschar	8,917	2,788	1,903	37	1	1	0	7/1	1-3	$25
State of Wisconsin General Hospital *	Madison	C. H. Bunting	14,696	3,392	3,392	75	1	1	1	7/1	3	$25
Columbia Hospital *[7]	Milwaukee	C. H. Hansmann	3,367	1,414	977	48	1	0	0	7/1	3	$25
St. Joseph's Hospital *	Milwaukee	J. C. Grill	8,027	1,861	1,814	31	1	0	0	6/15	1+	$100
Milwaukee County Hospital *[1]	Wauwatosa, Wis.	J. C. Grill	17,312	1,959	1,814	38	1	1	0	7/1&7/15	1+	$50
Queen's Hospital *	Honolulu, T. H.	N. P. Larsen	10,380	.....	.....	73	1	0	0	9/1	1-3	$200

20. PEDIATRICS

Revision of list is now taking place in collaboration with the American Board of Pediatrics

	Chief of Service	Inpatients Treated[3]	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Children's Hospital	Birmingham, Ala.	A. A. Walker	1,256	883	8,502	15	2	0	0	7/1	1-2	$38
Hillman Hospital *	Birmingham, Ala.	A. A. Walker	905	905	3,008	31	1	0	0	7/1	1	$50
California Babies' and Children's Hospital [1]	Los Angeles	S. S. Johnson	656	656	15,105	0	2	0	0	7/1	1	$100
Children's Hospital [1]	Los Angeles	V. E. Stork	1,686	1,142	39,691	114	2	8	0	1/1&7/1	1-3	$40
Los Angeles County Hospital *[1]	Los Angeles	E. E. Moody	2,372	2,372	4,430	84	3	0	0	4/1	2-3	$10
White Memorial Hospital *[1]	Los Angeles	M. B. Brooks	216	.....	8,477	8	1	0	0	7/1	3	$80
Children's Hospital of the East Bay [1]	Oakland, Calif.	C. Sweet	2,290	1,233	18,068	20	1	1	0	7/1	1	$25
Hospital for Children *[2]	San Francisco	C. F. Gelston	617	228	8,654	..	0	1	0	7/1	1	$25
San Francisco Hospital *[1]	San Francisco	.....	950	950	.....	7	1	0	0	7/1	3	$50
Stanford University Hospitals *[1]	San Francisco	H. K. Fuller	494	483	17,863	7	1	2	0	7/1	1-2	$25
University of California Hospital *[1]	San Francisco	F. S. Smyth	588	373	12,809	31	1	2	0	7/1	1+	$25
Children's Hospital [1]	Denver	.....	3,245	3,245	.....	53	4	0	0	7/1	1	$50
Denver General Hospital *	Denver	W. Jones	1,381	1,381	.....	39	1	0	0	1/1	1	$50
New Haven Hospital *[1]	New Haven, Conn.	G. F. Powers	1,036	.....	13,986	44	1	3	0	7/1	1+	[8]
Children's Hospital [1]	Washington, D. C.	J. S. Wall	7,671	5,066	71,193	148	12	0	0	1/1&7/1	1+	$10
Freedmen's Hospital *	Washington, D. C.	A. Ded. Smith	992	992	3,890	19	1	0	0	7/1	1-2	$10
Gallinger Municipal Hospital *[1]	Washington, D. C.	W. M. Yater	876	876	4,371	36	1	1	0	7/1	1	$25
Grady Hospital *	Atlanta, Ga.	W. W. Anderson and M. H. Roberts	1,271	1,271	22,953	69	2	4	0	7/1	1+	$80
Henrietta Egleston Hospital for Children [3]	Atlanta, Ga.	M. H. Roberts	1,281	769	.....	22	3	0	0	1/1&7/1	1	$10
University Hospital *[1]	Augusta, Ga.	C. M. Burpee	843	.....	1,923	16	1	1	0	7/1	1-2	$35
Children's Memorial Hospital [1]	Chicago	A. Aldrich	4,318	4,059	61,641	69	4	13	0	1/1&7/1	.....	None
Cook County Hospital *[1]	Chicago	M. L. Blatt	10,202	10,202	40,902	226	8	0	3	1/1&7/1	1-1½	$25
Michael Reese Hospital *[1]	Chicago	J. R. Gerstley	1,372	816	1,012	98	2	0	0	1/1&7/1	1	$50
Presbyterian Hospital *[1]	Chicago	C. G. Grulee	1,028	505	.....	30	1	3	0	7/1	1	$50
Provident Hospital *[1]	Chicago	F. W. Beasley	253	.....	6,335	6	1	0	2	7/1	1-3	$50
Research and Educational Hospital *[1]	Chicago	J. Hess	253	253	.....	24	2	0	0	7/1	1-2	$50
St. Vincent's Infant and Maternity Hospital	Chicago	M. L. Blatt	710	710	.....	7	2	0	0	7/1	1	$50
University of Chicago Clinics *[1]	Chicago	F. W. Schlutz	1,074	1,074	15,753	22	1	8	0	1/1&7/1	1-3	None
Indianapolis City Hospital *[1]	Indianapolis	J. C. Carter	763	763	9,735	73	1	0	0	7/1	1	$42
Indiana University Medical Center *[1]	Indianapolis	M. Winters	1,421	.....	3,984	48	1	1	0	7/1	1-2	$83

Numerical and other references will be found on page 788.

20. PEDIATRICS—(Continued)

		Chief of Service	Inpatients Treated [a]	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
University Hospitals ★[1]	Iowa City	P. C. Jeans	862	819	2,134	37	1	2	0	7/1	1-6	$21
University of Kansas Hospitals ★[1]	Kansas City, Kan.	F. C. Neff	864	.....	2,250	35	1	0	0	7/1	1	$60
Louisville City Hospital ★[1]	Louisville, Ky.	J. W. Bruce	2,651	2,651	10,136	36	1	3	0	7/1	1-3	$14
Charity Hospital ★[1]	New Orleans	E. A. Socola and R. H. Strong	2,566	2,566	20,076	92	3	4	0	7/1	1-3	$25
Touro Infirmary ★	New Orleans	J. Graubarth	488	.....	11,312	15	1	2	0	7/1	1	$25
Baltimore City Hospitals ★	Baltimore	T. C. Goodwin	345	345	.....	33	1	1	0	7/1	1	$12
Johns Hopkins Hospital ★[1]	Baltimore	E. A. Park	1,084	918	38,150	71	1	4	0	7/1&9/1	1-6	None
Union Memorial Hospital ★[1]	Baltimore	D. C. W. Smith	1,262	.....	2,834	4	1	1	0	7/1	1-2	$30
University Hospital ★[1]	Baltimore	C. L. Joslin	629	.....	15,369	68	1	2	0	7/1	1-4	None
Boston City Hospital ★[1]	Boston	M. J. English	5,160	5,160	11,296	130	1	0	0	Varies	1+	$83
Boston Floating Hospital [1]	Boston	E. W. Barron	1,065	996	11,898	21	0	4	0	Varies	1	$10
Children's Hospital	Boston	K. D. Blackfan	1,714	824	25,473	39	4	0	0	1/1, 5/1, 9/1	1½	None
Massachusetts General Hospital ★[1,34]	Boston	H. H. Higgins	408	.....	6,455	22	1	0	0	10/1	2	$42
University Hospital ★[1]	Ann Arbor, Mich.	C. F. McKhann	530	.....	3,617	27	1	4	0	7/1	1-3	$25
Children's Hospital [1]	Detroit	T. B. Cooley	3,817	.....	18,265	144	2	14	0	7/1	1-2	$25
Henry Ford Hospital ★	Detroit	J. A. Johnston	1,002	.....	10,263	21	3	0	0	7/1	2	$130[e]
Minneapolis General Hospital ★[1]	Minneapolis	A. V. Stoesser	1,552	1,522	9,553	37	0	1	3	7/1	1-3	$25
University Hospitals ★[1]	Minneapolis	I. McQuarrie	1,841	.....	5,603	86	0	0	3	7/1	3	$90
Mayo Foundation	Rochester, Minn.	(See page 788)										
Children's Mercy Hospital [1]	Kansas City, Mo.	C. B. Summers	2,071	2,071	15,276	108	3	0	0	7/1	1	$25
Kansas City General Hospital ★	Kansas City, Mo.	H. Gilkey	2,327	2,327	1,607	62	1	0	0	7/1	1-2	$50
Wheatley-Provident Hospital	Kansas City, Mo.	F. S. Hogue	167	167	923	1	2	0	0	3/1	1	$63
Homer G. Phillips Hospital ★[1]	St. Louis	W. A. Rupe	1,675	1,675	2,131	62	1	2	0	7/1	1-3	$75
St. Louis Children's Hospital [1]	St. Louis	A. F. Hartmann	3,590	2,673	.....	62	1	10	1	7/1	1	$75
St. Louis City Hospital ★	St. Louis	J. C. Jardon	1,705	1,705	5,142	39	1	1	0	7/1	1-2	$50
St. Mary's Group of Hospitals ★	St. Louis	J. Zahorsky	1,233	.....	10,112	17	0	0	2	7/1	3	$25
Jersey City Hospital ★	Jersey City, N. J.		1,124	1,004	2,066	11	1	1	0	7/1	1+	$75
Albany Hospital ★[1]	Albany, N. Y.	H. L. K. Shaw	522	372	1,532	18	1	1	0	7/1	1	$25
Cumberland Hospital ★	Brooklyn	T. D. Given	1,611	1,611	8,200	41	1	1	0	1/1&7/1	1	$18
Jewish Hospital ★[1]	Brooklyn	B. Kramer	688	289	8,920	52	1	2	0	7/1	1	$25
Kings County Hospital ★	Brooklyn	G. Brockway and I. Krahulik	2,810	2,810	9,909	86	2	2	0	7/1	2	$18
Long Island College Hospital ★[1]	Brooklyn	C. A. Weymuller	524	499	13,113	29	1	2	0	7/1	2	$23
Norwegian Lutheran Deaconesses' Home and Hospital ★[1]	Brooklyn	C. M. Fisher and J. A. Monfort	343	.....	2,321	..	1	0	0	7/1	1	None
Children's Hospital [1]	Buffalo	D. P. Arnold	4,830	.....	34,430	69	1	4	0	7/1	1	$25
Edward J. Meyer Memorial Hospital ★[1]	Buffalo	F. C. Gustina	154	154	3,919	5	1	2	0	7/1	3-5	$250
Queens General Hospital ★[1]	Jamaica, N. Y.	H. A. Reisman	2,666	2,666	5,636	94	2	2	0	7/1	1	$18
Babies Hospital	New York City	R. McIntosh	1,452	.....	.....	..	1	11	0	7/1	1	$50
Bellevue Hospital ★[1]	New York City	C. H. Smith	3,499	3,499	43,963	86	1	0	0	1/1&7/1	1-2	$83
Flower and Fifth Avenue Hospitals ★[1]	New York City	R. A. Benson	317	278	2,664	28	1	0	0	7/1	1	$25
Harlem Hospital ★	New York City	M. Gliech	1,225	1,225	14,725	33	1	0	0	7/1	1	$18
Lincoln Hospital ★	New York City	A. T. Martin	888	888	7,346	13	1	0	0	7/1	1+	None
Metropolitan Hospital ★[1]	New York City	R. A. Benson	1,247	1,247	6,911	27	1	1	0	7/1	1+	$18
Morrisania City Hospital ★	New York City	L. H. Barenberg	869	869	3,614	17	1	1	0	1/1&7/1	1	$18
Mount Sinai Hospital ★[1,9]	New York City	.....	.....	.....	22,053	..	1	1	0	1/1&7/1	1+	$50
New York City Hospital ★	New York City	C. S. Boyd	760	760	3,087	40	1	0	0	7/1	1	$100
New York Foundling Hospital [1,27]	New York City	.....	1,916	1,916	9,110	27	1	3	0	1/1&7/1	1-2	$25
New York Hospital ★	New York City	S. Z. Levine	1,241	943	31,549	79	1	5	0	1/1&7/1	1-4	$25
New York Post-Graduate Medical School and Hospital ★	New York City	A. G. De Sanctis	1,122	909	24,576	5	1	1	0	1/1&7/1	1-2	None
St. Luke's Hospital ★[1]	New York City	F. E. Johnson	494	445	7,046	16	1	1	0	1/1	1-2	$.5
Strong Memorial and Rochester Municipal Hospitals ★	Rochester, N. Y.	S. W. Clausen	1,366	1,024	16,557	52	2	3	0	7/1	1-4	$42
Sea View Hospital [1,31]	Staten Island, N. Y.	B. Schick	377	377	.....	3	4	0	0	1/1&7/1	1+	$100
Syracuse Memorial Hospital ★	Syracuse, N. Y.	B. Doust	1,150	605	.....	14	1	0	0	7/1	1	None
Grasslands Hospital ★[1]	Valhalla, N. Y.	F. D. Barnes	515	515	1,635	15	1	1	0	1/1&7/1	1-2	$75
Duke Hospital ★[1]	Durham, N. C.	W. C. Davison	832	822	7,645	56	1	2	6	7/1	1-3	None
Watts Hospital ★	Durham, N. C.	B. W. Roberts	731	292	1,595	4	0	1	0	7/1	1	$25
Children's Hospital	Akron, O.	.....	1,567	.....	10,825	33	1	0	0	7/1	1-2	$75
Children's Hospital [1]	Cincinnati	A. G. Mitchell	4,672	2,656	25,950	52	7	9	0	7/1	2	$25
Cincinnati General Hospital ★[1]	Cincinnati	A. G. Mitchell	1,315	1,315	8,372	64	7	8	0	7/1	1-3	[a]
University Hospitals ★[1]	Cleveland	H. J. Gerstenberger	1,182	755	25,159	51	1	2	0	7/1	2	$25
Children's Hospital	Columbus, O.	F. H. Baxter	2,787	.....	65,383	53	1	4	0	7/1	1-2	$25
University Hospitals ★[1]	Oklahoma City	C. H. Hall	437	406	4,364	25	1	0	0	7/1	1	$50
University of Oregon Medical School Hospitals and Clinics ★[1]	Portland	J. B. Bilderbach	2,818	2,818	8,008	64	1	0	0	7/1	1	$40
Children's Hospital [1]	Philadelphia	J. Stokes, Jr.	2,223	1,983	39,934	39	1	10	0	7/1	1-3	None
Children's Hospital of the Mary J. Drexel Home [1]	Philadelphia	H. C. Abernathy	937	.....	13,910	8	1	0	0	7/1	1	$100
Hahnemann Hospital ★	Philadelphia	C. S. Raue	725	.....	6,156	21	0	1	0	9/1	1	$50
Hospital of the University of Pennsylvania	Philadelphia	J. Stokes	314	.....	4,484	13	1	0	0	7/1	1	None
Jewish Hospital ★[1]	Philadelphia	M. Solis-Cohen	526	.....	697	37	1	0	0	6/15	1-2	None
Philadelphia General Hospital ★[1]	Philadelphia	.....	1,973	1,973	4,812	..	1	0	0	7/1&8/1	1-2	$100
St. Christopher's Hospital for Children [1]	Philadelphia	F. Krauss	1,950	.....	58,227	33	1	4	0	9/1	1	$50
Temple University Hospital ★[1]	Philadelphia	W. E. Nelson	350	350	5,716	15	2	0	0	9/1	3	$40
Children's Hospital [1]	Pittsburgh	H. T. Price	1,985	1,370	5,945	65	1	3	0	9/1	1	$35
Roper Hospital ★	Charleston, S. C.	M. W. Beach	664	465	7,569	37	1	1	1	7/1	1-3	$10
T. C. Thompson Children's Hospital [1]	Chattanooga, Tenn.	W. E. Van Order	739	680	17,860	23	1	1	0	7/1	1-2	$50
John Gaston Hospital ★	Memphis, Tenn.	A. J. Jacobs	1,524	.....	6,087	40	1	0	0	7/1	1	$65
George W. Hubbard Hospital of Meharry Medical College ★[1]	Nashville, Tenn.	J. W. Jones	475	.....	3,020	10	1	0	0	7/1	1-2	$75
Vanderbilt University Hospital ★[1]	Nashville, Tenn.	H. R. Casparis	675	550	11,980	62	1	3	0	7/1	1+	$35
Children's Memorial Medical Center [1,23]	Dallas, Tex.	H. L. Moore	1,604	.....	29,802	20	1	7	0	7/1	3	$25
John Sealy Hospital ★[1]	Galveston, Tex.	Reading	645	.....	7,200	20	1	2	0	7/1	1-3	$25
University of Virginia Hospital ★	Charlottesville	L. T. Royster	1,212	1,212	5,083	23	1	1	0	7/1	1	$50
Medical College of Virginia, Hospital Div. ★	Richmond	L. E. Sutton	302	.....	8,879	62	0	2	0	7/1	1	$25
State of Wisconsin General Hospital ★[1]	Madison	J. E. Gonce	684	.....	2,427	15	1	0	0	7/1	3	$25
Milwaukee Children's Hospital	Milwaukee											
Milwaukee County Hospital ★[1]	Wauwatosa, Wis.	R. F. Schowalter	2,466	2,466	8,112	17	2	0	0	7/1&7/15	1-3	$50

21. PHYSICAL THERAPY

Stanford University Hospitals ★[1,34]	San Francisco	W. Northway	2,751	2	5,023	..	1	0	0	7/1	1	$25
Michael Reese Hospital ★[1]	Chicago	C. O. Molander	394	.....	5,900	..	1	0	0	7/1	1	...
Mayo Foundation	Rochester, Minn.	(See page 788)										

Numerical and other references will be found on page 788.

22. PLASTIC SURGERY

	Chief of Service	Inpatients Treated[3]	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Mayo Foundation ..... Rochester, Minn.	(See page 788)										
Kings County Hospital *[1] ..... Brooklyn	W. A. Coakley	925	.....	2,309	4	1	1	0	7/1	2	$18
Presbyterian Hospital *[1] ..... New York City	A. O. Whipple	.....	.....	..	1	1	1	0	7/1	1	None
Graduate Hospital of the University of Pennsylvania *[2,5] ..... Philadelphia	R. H. Ivy	238	238	602	1	1	0	0	7/1	1	None

23. PSYCHIATRY

Revision of list is now taking place in collaboration with the American Board of Psychiatry and Neurology

Compton Sanitarium ..... Compton, Calif.	G. Meyers	396	396	.....	..	1	0	0	Varies	1+	$300
Stanford University Hospitals *[1,12] ..... San Francisco	G. Johnson	458	316	9,583	5	1	2	0	7/1	1-2	$25
University of California Hospital *[1] ..... San Francisco	W. J. Kerr	96	76	2,687	1	0	1	0	7/1	1+	$25
Mendocino State Hospital [1] ..... Talmage, Calif.	R. O. Le Baron	3,549	.....	50	52	2	0	0	Varies	1+	$50
Colorado Psychopathic Hospital [1] ..... Denver	F. G. Ebaugh	944	944	6,169	13	2	0	6	9/1	1-3	$100[m]
Colorado State Hospital ..... Pueblo	F. H. Zimmerman	4,353	4,353	.....	53	8	0	0	Varies	1+	$150
Neuro-Psychiatric Institute of the Hartford Retreat [1] ..... Hartford, Conn.	C. C. Burlingame	873	873	.....	4	0	0	6	Varies	1½	$225[c]
Connecticut State Hospital ..... Middletown	R. L. Leak	4,442	4,442	45	74	3	0	0	Varies	1+	$54
New Haven Hospital *[1] ..... New Haven, Conn.	E. Kahn	310	.....	4,038	3	1	7	0	7/1	1+	[a]
Delaware State Hospital [1] ..... Farnhurst	M. A. Tarumianz	1,141	1,141	1,917	30	2	0	0	7/1	1-2	$50
Gallinger Municipal Hospital * ..... Washington, D. C.	J. L. Gilbert	3,230	3,230	.....	54	0	1	0	7/1	1	$25
St. Elizabeths Hospital [1] ..... Washington, D. C.	R. H. Guthrie	7,640	7,640	.....	201	10	0	0	7/1&10/1	1	$167
Cook County Hospital *[1] ..... Chicago	F. J. Gerty	6,571	6,571	.....	10	6	0	0	1/1&7-1	1-3	$25
Michael Reese Hospital *[1,5] ..... Chicago	R. R. Grinker	490	222	4,059	7	2	0	0	7/1	2	$50
Research and Educational Hospital * ..... Chicago	A. A. Low	137	137	.....	1	3	0	4	7/1	1-3	$50
University of Chicago Clinics *[1] ..... Chicago	D. Slight	214	.....	3,439	1	1	0	0	7/1	1-3	None
Elgin State Hospital [1] ..... Elgin, Ill.	E. Liebert	6,586	6,586	664	177	3	0	0	Varies	1	$83
Central State Hospital ..... Indianapolis	M. A. Bahr	2,670	2,670	.....	30	4	0	0	Varies	1+	$157
Indianapolis City Hospital *[5] ..... Indianapolis	L. Carter	701	.....	1,833	13	1	0	0	7/1	1-3	$42
Logansport State Hospital [1,12] ..... Logansport, Ind.	C. L. Williams	2,284	2,284	.....	38	4	0	0	7/1	2-3	$150
Iowa State Psychopathic Hospital [1] ..... Iowa City	A. H. Woods	328	309	1,535	0	3	2	1	7/1	1	$64
Menninger Sanitarium ..... Topeka, Kan.	W. C. Menninger and H. Crank	154	.....	254	1	4	0	0	1/1&7/1	1	$120[c]
U. S. Public Health Service Hospital [7] ..... Lexington, Ky.	W. A. Preston	1,026	1,026	.....	12	6	0	0	...	1-2	$150
Johns Hopkins Hospital *[1] ..... Baltimore	J. C. Whitehorn	313	257	4,806	0	1	3	0	7/1&9/1	1-6	None
Spring Grove State Hospital [1] ..... Catonsville, Md.	S. W. Weltmer	2,550	2,550	781	72	3	0	0	1/1&7/1	1+	$100
Springfield State Hospital [1] ..... Sykesville, Md.	K. B. Jones	3,456	3,456	3,192	57	4	0	0	7/1	1+	$125
Sheppard and Enoch Pratt Hospital [1] ..... Towson, Md.	R. McC. Chapman	708	708	.....	7	7	0	0	1/1&7/1	1-3	$100
McLean Hospital [1] ..... Belmont, Mass.	K. J. Tillotson	403	403	.....	4	9	0	1	Varies	1-2	$75
Boston Psychopathic Hospital [1] ..... Boston	C. M. Campbell	2,171	2,171	7,952	4	8	0	0	9/1	1+	$75
Boston State Hospital [1] ..... Boston	H. F. Norton	1,165	1,165	543	150	6	0	0	Varies	1+	None
Massachusetts General Hospital *[5] ..... Boston	S. Cobb	89	.....	.....	..	1	1	0	1/1&7/1	1-2	$42
Foxboro State Hospital ..... Foxboro, Mass.	G. B. Pearson	1,428	1,428	500	44	1	0	0	Varies	1	$45
Gardner State Hospital [1] ..... Gardner, Mass.	F. W. Moore	1,747	1,513	95	33	8	0	0	Varies	1+	$150
Danvers State Hospital [1] ..... Hathorne, Mass.	L. Maletz	3,440	3,440	2,208	122	2	0	0	Varies	1	$45
Medfield State Hospital ..... Medfield, Mass.	E. K. Holt	2,216	2,216	198	19	1	0	0	Varies	1-2	$150
Northampton State Hospital [1] ..... Northampton, Mass.	G. C. Randall	2,741	2,741	903	61	1	0	0	Varies	1+	$150
Grafton State Hospital [1] ..... North Grafton, Mass.	H. L. Paine	1,766	1,766	1,948	30	2	0	0	Varies	1	None
Taunton State Hospital [1] ..... Taunton, Mass.	R. M. Chambers	2,359	2,359	2,698	89	5	0	0	7/1	1-2	$150
Westboro State Hospital [1] ..... Westboro, Mass.	A. J. Lang	2,439	2,439	990	63	3	0	0	Varies	1-2	$150
Worcester State Hospital [1] ..... Worcester, Mass.	W. Malamud	3,196	3,196	428	137	10	0	0	1/1&7/1	1	None
University Hospital *[1] ..... Ann Arbor, Mich.	R. W. Waggoner	339	.....	2,967	2	1	2	0	7/1	1-3	$25
City of Detroit Receiving Hospital *[1,10] ..... Detroit		5,722	5,722	1,076	88	1	2	0	7/1	1+	$75[c]
Henry Ford Hospital * ..... Detroit	T. J. Heldt	789	.....	6,888	16	1	0	0	9/1	1-3	$130[c]
Eloise Hospital and Infirmary * ..... Eloise, Mich.	M. H. Hoffmann	4,119	.....	.....	63	7	0	0	7/1	2	$161.66
Pontiac State Hospital ..... Pontiac, Mich.	P. V. Wagley	.....	.....	.....	77	2	2	0	Varies	3	$80
Traverse City State Hospital [1] ..... Traverse City, Mich.	R. P. Sheets	3,000	3,000	823	59	2	0	0	Varies	3	$80[c]
Ypsilanti State Hospital [1] ..... Ypsilanti, Mich.	O. R. Yoder	3,410	3,410	200	54	2	0	0	Varies	1-3	$165
Minnesota General Hospital *[1,12] ..... Minneapolis	J. C. Michael	1,301	1,301	5,186	54	0	1	0	7/1	1-3	$75
University Hospitals *[1,12] ..... Minneapolis	J. C. McKinley	637	.....	3,885	23	0	0	2	7/1	3	$90
Mayo Foundation ..... Rochester, Minn.	(See page 788)										
St. Peter State Hospital [1] ..... St. Peter, Minn.	G. H. Freeman	2,799	2,799	.....	48	1	0	0	Varies	1-2	$75
State Hospital No. 1 ..... Fulton, Mo.	R. Hanks	3,016	3,016	52	59	3	0	0	7/1	1-3	$100
State Hospital No. 2 ..... St. Joseph, Mo.	F. A. Carmichael	3,450	3,450	100	65	4	0	0	Varies	1+	$75
City Sanitarium ..... St. Louis	L. H. Kohler	3,777	3,777	.....	80	2	8	0	7/1	1	$75
St. Louis City Hospital * ..... St. Louis	J. Whitehorn	1,447	1,447	1,426	28	1	2	0	7/1	1-3	$75
Hastings State Hospital ..... Ingleside, Neb.	J. C. Nielsen	1,738	1,534	688	45	0	3	0	Varies	1-2	$125
Norfolk State Hospital ..... Norfolk, Neb.	G. E. Charlton	1,227	1,227	151	36	4	0	0	Varies	1+	$140
Bishop Clarkson Memorial Hospital * ..... Omaha	A. E. Bennett	321	.....	331	5	1	0	0	7/1	1	$50
New Hampshire State Hospital ..... Concord	C. H. Dolloff	2,834	2,834	740	48	1	0	0	Varies	1+	$75
New Jersey State Hospital [1] ..... Greystone Park	M. A. Curry	7,433	7,433	2,646	88	11	0	0	Varies	1+	$160
New Jersey State Hospital [1] ..... Marlboro	J. B. Gordon	3,183	3,183	905	134	1	0	0	7/1	1	$50
Albany Hospital *[12] ..... Albany	D. R. Cameron	457	457	1,908	26	1	1	0	7/1	1	$25
Binghamton State Hospital [1] ..... Binghamton, N. Y.	W. C. Garvin	2,768	2,768	1,324	58	3	0	0	Varies	1+	$150
Buffalo State Hospital [1] ..... Buffalo	C. Fletcher	3,173	3,173	1,964	35	3	0	0	Varies	1+	$150
Edward J. Meyer Memorial Hospital *[1,12] ..... Buffalo	E. A. Sharp and S. A. Hartwell	1,334	1,334	3,703	43	1	0	0	7/1	3-4	$59[c]
Central Islip State Hospital [1] ..... Central Islip, N. Y.	D. Corcoran	9,453	9,453	3,273	184	10	0	0	1/1&7/1	1-3	$150
Hastings Hillside Hospital ..... Hastings-on-Hudson, N. Y.	L. Wender	127	127	1,446	0	1	0	0	7/1	1	$100
Gowanda State Homeopathic Hospital ..... Helmuth, N. Y.	E. V. Gray	3,208	3,208	.....	99	6	0	0	Varies	1+	$150
Kings Park State Hospital [1] ..... Kings Park, N. Y.	J. H. Shaffelton	6,015	6,015	.....	117	9	0	0	Varies	1+	$150
Marcy State Hospital ..... Marcy, N. Y.	W. W. Wright	3,165	3,165	277	30	2	0	0	Varies	1+	$150
Middletown State Homeopathic Hospital [1] ..... Middletown, N. Y.	W. A. Schmitz	3,798	3,798	1,232	95	4	0	0	Varies	1+	$150
Bellevue Hospital *[1] ..... New York City	K. Bowman	30,215	30,215	11,533	317	0	0	5	1/1&7/1	2	...
New York Hospital * ..... New York City	O. Diethelm	346	.....	6,485	2	2	7	0	7/1	1-5	$50
New York State Psychiatric Institute and Hospital [1] ..... New York City	N. D. C. Lewis	395	395	1,724	1	8	0	0	1/1&7/1	1-2	$25
U. S. Marine Hospital ..... New York City	S. D. Vestermark	809	.....	91	6	2	0	0	7/1	1	$150
St. Lawrence State Hospital [1] ..... Ogdensburg, N. Y.	J. A. Pritchard	2,622	2,622	765	68	6	0	0	Varies	1+	$150
Rockland State Hospital [1] ..... Orangeburg, N. Y.	R. E. Blaisdell	2,672	2,672	3,720	187	3	0	0	7/1	1-2	$150
Hudson River State Hospital [1] ..... Poughkeepsie, N. Y.	R. P. Folsom	5,073	5,073	8,477	105	2	0	0	Varies	1+	$150
Creedmoor State Hospital ..... Queens Village, N. Y.	G. W. Mills	5,501	5,501	3,977	144	2	0	0	Varies	2	$150
Rochester State Hospital ..... Rochester, N. Y.	J. L. Van De Mark	3,712	3,712	.....	88	2	0	0	Varies	1+	$150
Strong Memorial and Rochester Municipal Hospitals * ..... Rochester, N. Y.	R. C. A. Jaenike	477	357	1,174	..	1	0	0	7/1	1	$125[c]
Utica State Hospital [1] ..... Utica, N. Y.	W. E. Merriman	2,248	2,248	1,577	33	3	0	0	7/1	1+	$125
Grasslands Hospital * ..... Valhalla, N. Y.	T. P. Brennan	1,113	1,113	765	25	2	3	0	1/1&7/1	1-3	$118
New York Hospital—Westchester Division ..... White Plains, N. Y.	C. O. Cheney	671	671	.....	5	2	4	0	1/1&7/1	1-3	$125

Numerical and other references will be found on page 788.

23. PSYCHIATRY—(Continued)

Chief of Service	Inpatients Treated [2]	Service or House Census	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Duke Hospital *[1] ..... Durham, N. C. ..... R. S. Lyman	47	27	352	..	0	1	0	7/1	1-3	None
Cincinnati General Hospital *[1] ..... Cincinnati ..... E. A. North	1,694	1,694	.....	13	2	2	0	7/1	1-3	"
Longview State Hospital ..... Cincinnati ..... E. A. Baber	3,234	2,733	1,053	71	2	0	0	Varies	1+	$75
City Hospital * ..... Cleveland ..... L. J. Karnosh	748	748	2,431	18	1	2	0	7/1	1-3	$40
Columbus State Hospital [1] ..... Columbus, O. ..... J. F. Bateman	3,400	3,400	952	65	1	1	0	7/1	1-2	$50
Toledo State Hospital ..... Toledo, O. ..... O. O. Fordyce	3,480	3,480	1,799	52	1	0	0	7/1	2	$100
Harding Sanitarium ..... Worthington, O. ..... G. T. Harding	305	305	.....	1	1	0	0	1/1	1	$100
Oregon State Hospital ..... Salem ..... B. F. Williams	3,545	300	100	100	2	0	0	10/1	1	$100
Danville State Hospital ..... Danville, Pa. ..... L. R. Chamberlain	2,483	2,483	3,816	22	1	0	0	Varies	1	$.00
Harrisburg State Hospital [1] ..... Harrisburg, Pa. ..... H. K. Petry	2,500	2,500	276	39	3	0	0	9/1	1+	$125
Norristown State Hospital ..... Norristown, Pa. ..... A. P. Noyes	4,175	4,175	766	110	8	0	0	Varies	1+	$125
Friends Hospital [1] ..... Philadelphia ..... T. L. Dehne	248	248	.....	5	2	0	0	7/1	1-2	$100
Institute of the Pennsylvania Hospital [1] ..... Philadelphia ..... L. H. Smith	316	.....	3,715	0	0	0	4	7/1	1-	Varies
Pennsylvania Hospital, Department for Mental and Nervous Diseases [1] ..... Philadelphia ..... L. H. Smith	475	475	2,179	8	0	0	6	1/1&7/1	1	Varies
Philadelphia General Hospital *[1,12] ..... Philadelphia	6,082	6,082	15,070	..	1	0	0	7/1&8/1	1-2	$100
Temple University Hospital ..... Philadelphia ..... O. S. English	.....	.....	924	..	1	0	0	9/1	3	$40
St. Francis Hospital * ..... Pittsburgh ..... G. J. Wright and H. Garland ..... L. Mitchell	2,900	2,906	497	27	1	1	0	9/1	1-2	$65
Warren State Hospital [1] ..... Warren, Pa. ..... R. H. Israel	2,997	2 456	542	68	6	0	0	9/1	1-3	$125
State Hospital for Mental Diseases [1] ..... Howard, R. I. ..... C. P. Fitzpatrick	3,357	3,357	529	71	6	0	0	7/1	1-2	$75
Butler Hospital [1] ..... Providence, R. I. ..... A. H. Ruggles	354	1	93	5	3	0	0	1/1&7/1	1	$.0
Charles V. Chapin Hospital ..... Providence, R. I. ..... J. J. McCaffrey	638	.....	100	21	1	0	0	1/1	1	$75
Galveston State Psychopathic Hospital [1] ..... Galveston, Tex. ..... L. R. Brown	450	450	.....	1	1	1	0	7/1	3	$100
John Sealy Hospital *[1,12] ..... Galveston, Tex. ..... T. H. Harris	916	.....	2,456	20	1	1	0	7/1	1-3	$25
University of Virginia Hospital *[12] ..... Charlottesville ..... D. C. Wilson	498	.....	1,284	9	1	1	0	7/1	1	$25
Western State Hospital [1] ..... Ft. Steilacoom, Wash. ..... W. N. Keller	3,368	3,368	.....	158	2	0	0	7/1	1-3	$100
Eastern State Hospital [1] ..... Medical Lake, Wash. ..... C. W. Miller Jr.	2,368	2,368	67	92	1	0	0	7/1	1	$100
Northern State Hospital ..... Sedro Wooley, Wash. ..... J. W. Doughty	2,231	2,231	.....	94	2	0	0	Varies	1-2	$100
State of Wisconsin General Hospital *[1] ..... Madison ..... W. F. Lorenz	1,082	.....	418	36	1	1	0	7/1	1	$25
Milwaukee County Hospital for Mental Diseases ..... Wauwatosa, Wis. ..... M. Kasak	1,599	1,599	1,225	21	5	0	0	1/1&7/1	3	$50
Milwaukee Sanitarium [12] ..... Wauwatosa, Wis. ..... L. H. Ziegler	362	362	.....	3	2	0	0	7/1	1-3	$50

24. RADIOLOGY

Revision of list is now taking place in collaboration with the American Board of Radiology

Chief of Service	Roentgenographic Examinations	X-Ray Treatments	Radium Treatments	Autopsy Percentage	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Salary
Los Angeles County Hospital *[1] ..... Los Angeles ..... R. A. Carter	146,898	12,649	1,072	57	3	0	0	7/1	3	$75
St. Vincent's Hospital * ..... Los Angeles ..... K. S. Davis	6,182	1,483	0	40	..	..	..	.....	..	...
San Francisco Hospital *[1] ..... San Francisco ..... L. Bryan and L. H. Garland	57,894	4,710	59	56	4	0	0	7/1	1	$50
Stanford University Hospitals *[1] ..... San Francisco ..... R. R. Newell	12,646	7,091	237	53	1	1	0	7/1	1-2	$25
University of California Hospital *[1] ..... San Francisco ..... R. S. Stone	10,908	9,513	458	67	1	3	0	7/1	1+	$25
Colorado General Hospital *[12] ..... Denver ..... E. A. Schmidt	6,626	2,173	24	83	1	0	0	8/1	2	$40
Hartford Hospital * ..... Hartford, Conn. ..... D. J. Roberts	11,178	6,693	84	57	1	0	0	1/1&7/1	2-3	$75
New Haven Hospital *[1] ..... New Haven, Conn. ..... H. Wilson	19,004	.....	.....	59	1	2	0	7/1	1+	"
Garfield Memorial Hospital * ..... Washington, D. C. ..... E. A. Merritt	8 089	.....	.....	50	1	0	1	7/1	1-2	$50
Georgetown University Hospital * ..... Washington, D. C. ..... F. O. Coe	5,902	2,930	47	44	0	0	2	7/1	3	$50
Sibley Memorial Hospital * ..... Washington, D. C. ..... J. F. Elward	2,882	93	39	43	2	0	0	7/1	1-3	$65
Veterans Administration Facility ..... Washington, D. C. ..... W. P. Eynes	8,276	1,848	8	32	1	0	0	Varies	1+	...
Walter Reed General Hospital * ..... Washington, D. C. ..... W. L. Thompson	22,873	5,288	319	82	1	0	1	Varies	2-4	...
Grady Hospital * ..... Atlanta, Ga. ..... P. Elkin	22,232	918	.....	38	1	0	0	7/1	1	$20
Piedmont Hospital * ..... Atlanta, Ga. ..... G. R. Hrdlicka	2,572	1,139	22	43	1	0	0	7/1	3	$50
Cook County Hospital *[1] ..... Chicago ..... M. J. Hubeny	91,330	32,085	.....	39	4	0	2	1/1&7/1	1-3	$50
Michael Reese Hospital * ..... Chicago ..... R. A. Arens	21,450	5,—6,177	.....	60	0	0	2	7/1	3	$25
Passavant Memorial Hospital *[1] ..... Chicago ..... J. T. Case	3,118	1,388	.....	70	0	0	1	1/1&7/1	3	$100
Presbyterian Hospital * ..... Chicago ..... F. H. Squire	19,428	4,986	61	64	2	0	0	Varies	2	$50
Provident Hospital * ..... Chicago ..... B. W. Anthony	4,523	1,789	40	47	1	0	0	7/1	1-3	$50
Research and Educational Hospital * ..... Chicago ..... A. Brunn	9,214	9,000	67	87	2	0	0	7/1	1-3	$50
St. Luke's Hospital * ..... Chicago ..... E. L. Jenkinson	27,000	5,244	42	71	0	0	2	7/1	3	$25
University of Chicago Clinics * ..... Chicago ..... P. C. Hodges	17,955	7,862	70	78	1	3	3	7/1	1-3	$25
Evanston Hospital * ..... Evanston, Ill. ..... E. R. Crowder	14,443	373	.....	79	2	0	0	7/1	3	$50
Veterans Administration Facility ..... Hines, Ill. ..... A. E. Hodges	48,840	20,402	3,461	42	3	0	0	7/1	1-3	...
Indiana University Medical Center *[1] ..... Indianapolis ..... R. E. Beeler	12,407	6,939	400	52	0	0	1	7/1	1-3	$63
Methodist Hospital * ..... Indianapolis ..... H. Ochsner	10,529	4,252	.....	24	2	0	0	7/1	1-2	$50
University Hospitals *[1] ..... Iowa City ..... H. D. Kerr	20,057	19,057	141	55	1	2	0	7/1	1+	$21
University of Kansas Hospitals * ..... Kansas City, Kan. ..... G. M. Tice	20,641	1,576	157	68	1	0	0	7/1	1-2	$50
Charity Hospital * ..... New Orleans ..... I. Arroyo	67,217	28,317	276	47	2	0	0	7/1	1-3	$25
Southern Baptist Hospital * ..... New Orleans ..... L. W. Magruder	8,937	6,487	.....	28	1	0	0	10/1	2-4	$100
Touro Infirmary * ..... New Orleans ..... M. D. Teitelbaum	31,388	.....	.....	71	1	0	0	7/1	1	$50
Johns Hopkins Hospital * ..... Baltimore ..... J. W. Pierson	15,249	5,506	173	73	1	1	0	7/1&9/1	1-3	None
University Hospital * ..... Baltimore ..... H. W. Walton	20,017	6,861	224	56	1	1	1	7/1	1-3	None
Beth Israel Hospital * ..... Boston ..... S. A. Robins	12,403	2,971	19	48	1	0	0	7/1	3	$35
Boston City Hospital *[1] ..... Boston ..... P. F. Butler	60,537	6,522	49	47	1	0	0	Var es	1+	$83
Children's Hospital ..... Boston ..... G. M. Wyatt	14,647	698	.....	69	1	0	0	7/1	1	...
Lahey Clinic ..... Boston ..... H. F. Hare	50,000	6,000	50	..	0	0	1	7/1	1-3	$100
Massachusetts General Hospital * ..... Boston ..... G. W. Holmes	31,549	4,692	34	63	1	2	0	7/1	3	$42
Massachusetts Memorial Hospitals *[1] ..... Boston ..... G. Levene	8,743	2,656	53	76	1	0	1	7/1	3	$42
New England Deaconess Hospital ..... Boston ..... J. H. Marks	6,737	5,638	250	48	1	0	0	7/1	2½-3	None
Peter Bent Brigham Hospital * ..... Boston ..... M. C. Sosman	16,805	3,648	342	65	1	1	0	7/1	1-3	$42
University Hospital * ..... Ann Arbor, Mich. ..... F. J. Hodges	27,856	942	187	66	3	3	0	7/1	1+	$25
City of Detroit Receiving Hospital *[1,10] ..... Detroit ..... J. C. Kenning	30,884	.....	17	39	1	1	0	7/1	1-2	$75
Grace Hospital * ..... Detroit ..... R. H. Stevens	11,856	5,220	14	31	1	1	0	Varies	1-3	Varies
Harper Hospital * ..... Detroit ..... L. Reynolds	.....	.....	.....	36	1	1	0	7/1	1	$25
Henry Ford Hospital * ..... Detroit ..... H. P. Doub	25,567	3,276	282	57	1	0	0	7/1	3	$130
Hurley Hospital * ..... Flint, Mich. ..... M. W. Cliff	7,851	5,797	24	34	0	0	2	7/1	3	$12
University Hospitals *[1] ..... Minneapolis ..... L. G. Rigler	31,507	10,497	700	79	0	0	5	7/1	3	$50
St. Joseph Hospital * ..... Kansas City, Mo. ..... C. E. Virden	4,909	2,157	75	74	1	0	0	7/1	1-3	$75
Barnes Hospital * ..... St. Louis ..... S. Moore	16,810	1,116	119	64	1	1	0	7/1	1-3	$25
Homer G. Phillips Hospital *[1] ..... St. Louis ..... E. W. Spinzig	13,769	2,895	48	39	1	0	0	7/1	1-3	$75
St. Louis City Hospital * ..... St. Louis ..... I. R. Sante	52,703	2,080	195	48	1	1	0	7/1	3	$75
St. Luke's Hospital * ..... St. Louis ..... O. C. Zink	5,429	725	87	44	1	0	0	7/1	3	$75
Creighton Memorial St. Joseph's Hospital * ..... Omaha ..... J. F. Kelly	2,046	2,348	35	29	1	0	0	7/1	3	$80

Numerical and other references will be found on page 788.

24. RADIOLOGY—(Continued)

		Chief of Service	Roentgenotherapy Examinations	X-Ray Treatments	Radium Treatments	Autopsy Percentage	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Salary
University of Nebraska Hospital ★	Omaha	H. Hunt	4,741	2,908	121	86	2	0	0	7/1	1-3	$50
Mary Hitchcock Memorial Hospital ★	Hanover, N. H.	L. K. Sycamore	7,549	952	35	78	1	0	0	7/1	1	$42
Brooklyn Hospital ★	Brooklyn	J. Pepe	10,367	2,281	.....	44	1	0	0	1/1&7/1	1-2	$50
Jewish Hospital ★[1]	Brooklyn	M. G. Wasch	18,608	4,206	32	47	1	1	0	1/1&7/1	1½	$25
Kings County Hospital ★	Brooklyn	R. Rendich and A. B. Friedman	68,791	23,854	200	23	2	1	0	7/1	1-2	$18
Long Island College Hospital ★[1]	Brooklyn	A. L. L. Bell	12,791	3,607	98	38	1	2	0	7/1	3	$23
Methodist Hospital ★	Brooklyn	G. Cramp	6,072	1,506	74	44	1	0	0	7/1	1	None
Edward J. Meyer Memorial Hospital ★	Buffalo	C. R. Orr	12,403	3,330	9	33	0	2	0	7/1	3-4	$59[a]
Queens General Hospital ★[1]	Jamaica, N. Y.	I. S. Startz	23,475	7,782	168	67	2	0	0	7/1	1	$18
New Rochelle Hospital ★	New Rochelle, N. Y.	J. F. Miller	10,576	2,936	.....	41	1	0	0	7/1	1-2	$50
Bellevue Hospital ★[1]	New York City	L. Friedman	105,998	10,990	1,719	33	1	0	0	1/1&7/1	1	$83
Beth Israel Hospital ★[1]	New York City	I. S. Hirsch	8,200	2,295	110	33	3	0	0	1/1	1-2	$15
Bronx Hospital ★	New York City	W. Snow and J. Fried.	4,763	1,913	13	41	1	0	0	7/1	1-2	$50
Flower and Fifth Avenue Hospitals ★	New York City	J. C. Howard	5,807	1,732	14	36	2	0	0	7/1	1	None
Lenox Hill Hospital ★	New York City	E. Huber	13,580	2,982	30	58	1	0	0	7/1	1-2	$50
Montefiore Hosp. for Chronic Diseases ★[1,20]	New York City	M. Lenz and A. Bendick	7,078	6,991	74	71	3	0	0	1/1&7/1	1	$50
Morrisania City Hospital ★	New York City	S. Weitzner	23,629	7,832	80	31	1	0	0	1/1	1	$18
Mount Sinai Hospital ★[1,19]	New York City	M. L. Sussman	24,189	10,654	38	48	2	2	0	1/1&7/1	2	$50
New York City Hospital ★	New York City	E. Kraft	10,792	.....	.....	42	1	0	0	7/1	1	$100
New York Hospital ★	New York City	J. R. Carty	36,573	7,877	40	64	1	2	0	7/1	1-3	$50
New York Polyclinic Medical School and Hospital ★	New York City	E. E. Smith	6,021	3,057	33	23	1	0	0	7/1	2	None
New York Post-Graduate Medical School and Hospital ★	New York City	W. M. Meyer	9,708	2,897	618	37	1	2	0	1/1&7/1	1½	$30
New York University College of Medicine Clinic [1]	New York City	I. S. Hirsch	.....	.....	.....	..	0	0	1	10/1	1	None
Presbyterian Hospital ★[1]	New York City	R. Golden	36,156	18,199	217	49	1	2	0	9/1	3	$42
Roosevelt Hospital ★	New York City	W. H. Boone	14,058	1,861	76	45	1	0	0	7/1	1-2	$25
St. Luke's Hospital ★[1]	New York City	E. J. Ryan	20,987	5,127	211	51	1	1	0	1/1	2-3	$50
Welfare Hospital for Chronic Diseases ★[1]	New York City	H. K. Taylor	12,255	.....	.....	47	1	0	0	7/1	1	$100
Strong Memorial and Rochester Municipal Hospitals ★	Rochester, N. Y.	S. L. Warren	19,519	6,245	511	73	1	2	7	7/1	1-4	...
Sea View Hospital [1,21]	Staten Island, N. Y.	A. V. Shapiro	25,663	.....	.....	29	1	0	0	7/1	1	$160
Grasslands Hospital ★	Valhalla, N. Y.	A. G. Debbie	11,651	7,466	26	64	1	0	0	7/1	1	$118
Duke Hospital ★[1]	Durham, N. C.	R. J. Reeves	26,069	10,080	389	60	1	3	0	7/1	1-4	None
Watts Hospital ★	Durham, N. C.	W. W. Vaughan	6,798	2,380	108	40	1	0	0	7/1	1	$25
City Hospital ★	Akron, Ohio	F. T. Moore	10,827	5,716	66	36	2	0	0	7/1	3	$85
Cincinnati General Hospital ★	Cincinnati	S. Lange	21,757	8,060	471	51	1	3	0	7/1	1-3	*
Jewish Hospital ★	Cincinnati	S. Brown	5,588	1,450	64	30	1	0	0	7/1	1-3	$45
City Hospital ★	Cleveland	H. T. Karsner	21,472	7,806	.....	44	1	2	0	7/1	1-3	$40
Cleveland Clinic Foundation Hospital [24]	Cleveland	B. H. Nichols	17,302	4,000	2,000	51	0	0	3	7/1	1-3	$55
St. Luke's Hospital ★	Cleveland	R. J. May	15,456	2,965	59	43	1	0	0	6/25	3	$25
St. Vincent Charity Hospital ★	Cleveland	J. R. Andrews	5,569	931	37	56	1	0	0	7/1	1	$50
University Hospital ★[1]	Cleveland	E. Freedman	24,843	5,435	192	66	1	0	0	7/1	2	$50
University Hospitals ★	Oklahoma City	J. E. Heatley	18,319	9,090	295	56	1	0	0	7/1	1	$50
St. Vincent's Hospital ★	Portland, Ore.	S. E. Rees	5,059	388	.....	50	1	0	0	8/1	3	$50
University of Oregon Medical School Hospitals and Clinics ★	Portland, Ore.	D. L. Palmer	14,463	1,450	.....	58	1	2	0	7/1	3	$40
Abington Memorial Hospital ★	Abington, Pa.	J. D. Zullck	11,720	2,385	.....	56	1	0	0	7/1	1-2	$50
Bryn Mawr Hospital ★	Bryn Mawr, Pa.	R. S. Bromer	7,906	2,088	156	41	1	0	0	11/1	5	$50
Graduate Hospital of the University of Pennsylvania ★	Philadelphia	A. Finkelstein	10,080	1,884	50	50	0	0	2	7/1	2	$62
Hospital of the Protestant Episcopal Church ★	Philadelphia	R. P. Barden	7,791	2,059	.....	78	1	0	0	8/1	1	$50
Hospital of the University of Pennsylvania ★	Philadelphia	E. P. Pendergrass	14,411	7,252	30	56	2	0	4	10/1	1-3	None
Jefferson Medical College Hospital ★	Philadelphia	K. Kornblum	18,017	11,927	1,109	44	3	0	1	9/1	1	$50
Mount Sinai Hospital ★[1]	Philadelphia	G. Rosenbaum and L. Edelken	10,062	834	69	50	1	0	0	7/15	2-3	$25
Pennsylvania Hospital ★	Philadelphia	P. A. Bishop	10,431	2,167	163	69	1	0	0	7/1	1-3	$20
Philadelphia General Hospital ★[1]	Philadelphia	B. P. Widmann	19,491	—16,338—		69	1	0	0	7/1&8/1	1-2	$100
Presbyterian Hospital ★	Philadelphia	J. H. Vastine	16,345	2,943	84	82	1	0	1	6/1&7/1	1-2	$50
Temple University Hospital ★[1]	Philadelphia	W. E. Chamberlain	14,397	3,937	226	69	3	0	0	9/1	3	$40
Mercy Hospital ★	Pittsburgh	H. N. Mawhinney	11,127	2,373	224	37	1	0	0	9/1	1	None
Robert Packer Hospital ★	Sayre, Pa.	S. P. Perry	6,790	800	23	54	0	0	1	9/1	3	$50
Roper Hospital ★	Charleston, S. C.	B. Kalayjian	6,181	3,062	27	43	1	0	0	7/1	1-3	$25
John Gaston Hospital ★	Memphis, Tenn.	W. D. Atkinson	15,540	5,229	48	25	1	1	0	7/1	3	$33
Methodist Hospital ★	Memphis, Tenn.	S. W. Coley	3,089	2,280	25	33	1	0	0	7/1	3	$50
Vanderbilt University Hospital ★[1]	Nashville, Tenn.	C. C. McClure	10,570	3,143	.....	62	1	0	0	7/1	1+	$75
Baylor University Hospital ★	Dallas, Tex.	A. E. Seeds	2,528	—4,020—		31	0	1	0	7/1	1-2	$50
Parkland Hospital ★[1]	Dallas, Tex.	J. R. Maxfield, Jr.	14,571	3,774	49	31	1	0	0	7/1	1-3	$25
John Sealy Hospital ★[1]	Galveston, Tex.	R. B. Johnson	13,138	2,061	6	65	0	1	1	7/1	1-3	$25
Mary Fletcher Hospital ★	Burlington, Vt.	A. B. Soule, Jr.	3,378	3,887	37[b]	37	1	0	0	7/1	1	$50
University of Virginia Hospital ★	Charlottesville	V. W. Archer	14,892	4,348	146	40	1	1	0	7/1	1	$50
Medical College of Virginia, Hospital Div. ★	Richmond	F. B. Mandeville	10,865	3,141	108	37	0	1	0	7/1	3	$25
State of Wisconsin General Hospital ★[1]	Madison	E. A. Pohle	31,125	9,926	312	75	1	2	0	7/1	3	$25
Columbia Hospital ★	Milwaukee	S. A. Morton	2,898	2,947	90	48	1	0	0	7/1	3	$25

25. SURGERY

		Chief of Service	Inpatients Treated ★	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Hillman Hospital ★	Birmingham, Ala.	D. S. Moore	1,810	1,810	13,063	50	2	0	0	7/1	1	$50
Norwood Hospital ★	Birmingham, Ala.	C. N. Carraway and D. F. Talley	1,923	1,923	5,222	15	2	0	0	7/1	3	$100
Employees' Hospital of the Tennessee Coal, Iron and Railroad Company ★	Fairfield, Ala.	L. Noland	1,156	1,156	16,839	13	1	0	0	7/1	1	$150
Baptist State Hospital ★	Little Rock, Ark.	R. M. Eubanks	2,319	236	.....	11	1	0	0	7/1	1	$100
General Hospital of Fresno County ★	Fresno, Calif.	C. M. Vanderburgh	4,068	4,068	24,924	62	1	2	0	7/1	3	$65
Cedars of Lebanon Hospital ★	Los Angeles	L. Felger and M. H. Rabwin	2,176	1,019	4,583	31	1	0	0	7/1	1	$75
Los Angeles County Hospital ★[1]	Los Angeles	G. Thomason	4,437	4,437	29,158	111	7	0	0	1/1&7/1	3½	$10
White Memorial Hospital ★	Los Angeles	G. Thomason	1,200	.....	12,283	10	2	0	0	7/1	3	$80

Numerical and other references will be found on page 788.

25. SURGERY—(Continued)

		Chief of Service	Inpatients Treated[3]	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Highland-Alameda County Hospital *[1]	Oakland, Calif.	D. N. Richards and W. E. Mitchell	1,681	1,681	.....	48	1	1	0	7/1	1-3	$40
San Bernardino County Charity Hospital *	San Bernardino, Calif.	C. G. Hilliard	950	950	4,979	40	1	0	0	7/1	1	$100
San Diego County General Hospital *	San Diego, Calif.	C. M. Fox	2,366	2,366	4,918	69	2	0	0	7/1	1	$115
Hospital for Children *[2]	San Francisco	A. Kilgore	1,043	136	2,510	2	0	1	0	7/1	1	$25
Mary's Help Hospital *	San Francisco	E. Carlson	708	37	5,258	5	1	0	0	7/1	1	$75
Mount Zion Hospital *	San Francisco	H. Brunn	1,448	424	5,482	56	1	2	0	6/15	1	$50
St. Luke's Hospital *	San Francisco	A. Weeks	4,176	4,176	3,113	23	1	2	0	7/1	1	$100
San Francisco Hospital *[1]	San Francisco	H. Brunn and L. Eloesser	3,843	3,843	.....	..	10	0	0	7/1	1	$50
Stanford University Hospitals *[1]	San Francisco	E. Holman	1,865	800	15,263	32	1	5	0	7/1	1-2	$25
University of California Hospital *[1]	San Francisco	H. C. Naffziger	1,363	774	14,831	28	1	5	0	9/1	1+	$25
Santa Clara County Hospital *	San Jose, Calif.	H. Dahlem	3,345	3,345	21,402	14	1	0	0	7/1	1-3	$250
Colorado General Hospital *[13]	Denver	C. F. Hegner	813	813	5,490	51	1	1	0	8/1	2	$40
St. Luke's Hospital *	Denver	H. S. Finney	3,683	.....	.....	34	2	0	0	7/1	2	$50
Grace Hospital *	New Haven, Conn.	R. Nichols	1,740	470	1,359	18	1	1	0	7/1	3	$40
New Haven Hospital *	New Haven, Conn.	S. C. Harvey	4,726	.....	21,098	91	2	6	0	1/1&7/1	1+	*
Memorial Hospital *	Wilmington, Del.	J. G. Spackman	1,658	.....	2,627	35	1	2	0	9/1	3	$50
Central Dispensary and Emergency Hosp.*	Washington, D. C.	J. F. Mitchell	2,208	.....	1,641	27	1	3	0	6/15	1-3	$50
Freedmen's Hospital *	Washington, D. C.	E. L. Howes	1,979	1,060	27,309	27	1	4	0	7/1&10/1	1-2	$10
Gallinger Municipal Hospital *	Washington, D. C.	C. S. White	1,802	1,802	8,682	38	1	2	0	7/1	1	$25
Garfield Memorial Hospital *	Washington, D. C.	H. H. Kerr	4,500	1,220	2,000	58	1	1	0	7/1	1-3	$50
Georgetown University Hospital *	Washington, D. C.	J. A. Cahill	1,760	410	2,498	29	1	1	3	7/1	3	$75
Providence Hospital *	Washington, D. C.	J. A. Cahill	3,198	1,136	15,009	28	1	2	0	7/1	3	$25
Sibley Memorial Hospital *	Washington, D. C.	P. S. Putzki	1,923	.....	.....	12	1	0	0	7/1	2	$75
Duval County Hospital *	Jacksonville, Fla.	E. Jelks	925	.....	.....	21	1	2	0	7/1	1	$30
James M. Jackson Memorial Hospital *	Miami, Fla.	.....	2,730	.....	20,170	41	1	2	0	7/1	1	$75
Grady Hospital *	Atlanta, Ga.	.....	3,511	.....	47,267	89	2	4	2	7/1	1+	$20
St. Joseph's Infirmary *[1]	Atlanta, Ga.	G. P. Huguley	1,013	430	1,062	15	1	0	0	7/1	1-3	$75
University Hospital *[1]	Augusta, Ga.	J. H. Sherman	2,653	.....	5,638	50	1	4	0	7/1	1-4	$25
Emory University Hospital *	Emory University, Ga.	D. C. Elkin	1,004	351	.....	18	1	1	0	7/1	1-2	$50
Augustana Hospital *	Chicago	M. Percy	1,608	383	.....	17	1	0	0	1/1	1	None
Cook County Hospital *[1]	Chicago	M. Davison	14,754	14,754	46,377	148	12	0	0	1/1&7/1	3	$25
Grant Hospital *	Chicago	.....	2,842	237	5,554	15	2	0	0	7/1	1-3	$50
Mercy Hospital-Loyola University Clinics *	Chicago	M. F. McGuire	1,066	277	5,449	12	1	0	0	7/1	1-3	$50
Michael Reese Hospital *[1]	Chicago	S. Strauss	3,262	691	653	39	2	0	0	1/1&7/1	1-2	$50
Mount Sinai Hospital *[2]	Chicago	.....	1,502	298	6,116	12	1	0	0	7/1	1	$30
Norwegian-American Hospital *	Chicago	J. V. Fowler, Sr.	979	21	.....	5	1	0	0	7/1	1	$35
Passavant Memorial Hospital *[1]	Chicago	L. Davis	1,794	127	7,432	33	3	0	1	1/1&7/1	1+	None
Presbyterian Hospital *	Chicago	W. C. David	2,242	81	.....	26	2	0	0	Varies	1-3	$50
Provident Hospital *	Chicago	C. G. Roberts	1,058	.....	18,821	17	1	0	1	7/1	1-5	$50
Research and Educational Hospital *	Chicago	W. H. Cole	1,009	1,009	.....	32	3	0	0	7/1	1-3	$50
St. Joseph Hospital *	Chicago	H. McKenna	931	226	227	5	1	0	0	7/1	1	$50
St. Luke's Hospital *	Chicago	J. D. Ellis	3,227	484	5,719	33	1	2	0	7/1	1-3	$25
University of Chicago Clinics *	Chicago	J. B. Bumstead	1,802	1,802	20,105	56	1	3	6	1/1&7/1	1-6	$25
Wesley Memorial Hospital *	Chicago	R. W. McNealy	2,092	.....	.....	26	3	0	0	7/1	1-2	$25
Evanston Hospital *	Evanston, Ill.	F. Christopher	1,441	.....	6,296	42	1	0	0	7/1	1	$50
Indianapolis City Hospital *	Indianapolis	M. H. Hadley	1,486	1,486	14,631	35	2	0	0	7/1	1-2	$42
Indiana University Medical Center *[1]	Indianapolis	W. D. Gatch	1,918	.....	6,444	35	2	2	1	7/1	1-3	$83
Methodist Hospital *	Indianapolis	H. S. Leonard	7,380	.....	.....	65	2	0	0	7/1	1-2	$35
University Hospitals *[1]	Iowa City	F. R. Peterson	2,667	2,534	4,800	71	1	7	0	7/1	1-6	$21
University of Kansas Hospitals *	Kansas City, Kan.	T. G. Orr	735	.....	3,452	32	1	4	0	7/1	1-4	$50
St. Joseph Hospital *	Lexington, Ky.	F. W. Rankin and W. O. Bullock	1,543	403	.....	38	1	2	0	7/1	1-3	$30
Louisville City Hospital *	Louisville, Ky.	R. A. Griswold	2,026	2,026	22,513	85	1	16	0	7/1	1-5	$14
St. Joseph Infirmary *	Louisville, Ky.	I. Abell, Sr.	6,897	200	.....	23	1	1	0	7/1	1-2	$35
Charity Hospital *[1]	New Orleans	.....	12,099	12,099	59,738	164	17	6	0	7/1	1-4	$25
Touro Infirmary *	New Orleans	J. D. Rives	3,049	.....	12,974	48	3	0	0	7/1	1-2	$25
Baltimore City Hospitals *	Baltimore	T. B. Aycock	8,822	3,822	.....	150	1	5	0	7/1	1	$12
Bon Secours Hospital *	Baltimore	G. A. Stewart	1,032	755	630	11	1	2	0	7/1	1	$25
Church Home and Infirmary *[1]	Baltimore	T. S. Cullen	2,294	584	1,637	32	1	3	0	7/1	2-4	$20
Franklin Square Hospital *	Baltimore	E. S. Johnson	793	474	1,974	15	1	1	0	7/1	1	$25
Hospital for Women *	Baltimore	W. Rienhoff	641	388	3,643	3	1	2	0	7/1	1	$50
Johns Hopkins Hospital *	Baltimore	A. Blalock	2,175	1,657	45,911	56	1	6	0	7/1	1-8	None
Maryland General Hospital *	Baltimore	.....	3,243	461	3,782	20	1	5	0	7/1	1-4	$25
Mercy Hospital *	Baltimore	W. D. Wise	2,297	.....	5,342	31	1	4	0	9/1	3	$50
Provident Hospital and Free Dispensary *	Baltimore	G. C. Finney	641	571	1,023	12	2	1	0	10/5	1-3	$25
St. Agnes Hospital	Baltimore	.....	1,405	639	2,917	6	1	4	0	7/1&10/1	1-3	None
St. Joseph's Hospital *	Baltimore	W. R. Geraghty	1,768	.....	6,176	12	1	4	0	7/1	3-4	$10
Sinai Hospital *	Baltimore	A. Ullman	1,345	453	5,347	8	1	5	0	7/1	1	$50
South Baltimore General Hospital *	Baltimore	C. W. Masson	1,545	.....	7,030	17	1	3	0	7/1	1-4	$20
Union Memorial Hospital *	Baltimore	J. M. T. Finney, Jr.	3,344	.....	8,180	44	1	5	0	7/1	1-4	$40
University Hospital *[1]	Baltimore	A. M. Shipley	2,756	.....	12,269	33	1	4	0	7/1	1-4	None
West Baltimore General Hospital *	Baltimore	N. C. Marvel	849	285	4,265	13	3	0	0	7/1	3	$25
Beverly Hospital *	Beverly, Mass.	P. P. Johnson	1,304	859	932	32	1	0	0	9/1	2	$75
Beth Israel Hospital *	Boston	C. G. Mixter	2,760	929	5,674	49	1	2	0	1/1	1	$70
Boston City Hospital *[1]	Boston	J. C. Walter	13,638	13,638	75,546	102	5	2	0	Varies	1+	*
Children's Hospital	Boston	W. E. Ladd	1,726	1,423	13,212	32	2	1	0	1/1&7/1	1	$56
Lahey Clinic	Boston	F. H. Lahey	3,500	.....	.....	..	0	0	7	Quart.	1-3	$100[c]
Massachusetts General Hospital *[11]	Boston	E. E. Churchill and A. W. Allen	6,886	.....	30,670	38	2	2	0	1/1	1-3	$42
Massachusetts Memorial Hospitals *	Boston	H. M. Clute	3,878	.....	3,277	23	2	0	0	8/1	2	$50
Peter Bent Brigham Hospital *	Boston	E. C. Cutler	3,044	.....	33,851	51	1	5	1	3/1, 7/1, 11/1	1¾	$42
Cambridge Hospital *	Cambridge, Mass.	H. P. Stevens	1,138	395	3,521	9	1	0	0	7/1	1-2	$83
Truesdale Hospital	Fall River, Mass.	P. E. Truesdale	754	.....	.....	8	3	0	0	1/1&7/1	1-2	None
Memorial Hospital *	Worcester, Mass.	B. H. Alton	2,177	.....	2,358	27	1	0	0	8/1	1-2	$100
Worcester City Hospital *	Worcester, Mass.	L. R. Andrews	2,364	.....	7,500	24	1	0	0	7/1	1-2	$50
University Hospital *[1]	Ann Arbor, Mich.	F. Coller	2,070	.....	8,541	68	6	13	0	7/1	1-3	$75
Alexander Blain Hospital	Detroit	A. W. Blain and I. G. Downer	869	.....	.....	14	2	0	0	7/1	1-3	$75
City of Detroit Receiving Hospital *[1,10]	Detroit	C. G. Johnston and C. F. Vale	4,873	4,873	40,245	80	2	2	2	7/1	1-3	$75[c]
Grace Hospital *	Detroit	F. A. Kelly	4,643	1,392	3,363	63	1	2	0	7/1&9/1	3	$50
Harper Hospital *	Detroit	A. D. McAlpine	8,407	982	.....	..	1	7	0	7/1	1-3	$25
Henry Ford Hospital *	Detroit	R. D. McClure	6,784	.....	99,280	58	1	23	1	9/1	1-5	$130[c]
Providence Hospital *	Detroit	C. J. Jentgen	5,099	.....	.....	66	1	0	0	7/1	1	$100
Eloise Hospital and Infirmary *[1]	Eloise, Mich.	W. J. Seymour	1,715	1,715	1,879	34	1	4	0	7/1	1-5	$50
Hurley Hospital *	Flint, Mich.	A. H. Kretchmar	1,039	33	.....	21	3	0	0	7/1	1	$42
Blodgett Memorial Hospital *	Grand Rapids, Mich.	H. J. Vanden Berg	816	51	.....	13	1	0	0	7/1	1-2	$100
Butterworth Hospital *	Grand Rapids, Mich.	G. H. Southwick	4,786	209	.....	48	1	1	0	7/1	1-3	$100
St. Mary's Hospital *	Grand Rapids, Mich.	O. H. Gillett	2,807	.....	939	45	1	1	0	7/1	1-2	$50

Numerical and other references will be found on page 788.

25. SURGERY—(Continued)

		Chief of Service	Inpatients Treated	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Minneapolis General Hospital ★[1]	Minneapolis	A. A. Zierold	2,099	2,099	14,105	50	0	0	6	1/1&7/1	3	$25
University Hospitals ★[1]	Minneapolis	O. H. Wangensteen	1,413	.....	9,346	62	1	1	8	7/1	3	$50
Mayo Foundation	Rochester, Minn.	(See page 788)										
Ancker Hospital ★	St. Paul	A. R. Colvin and D. G. Gardiner	1,626	1,626	5,292	95	3	0	0	7/1	3	$50
St. Louis County Hospital ★	Clayton, Mo.	L. A. Will	2,792	.....	42,729	55	1	3	0	7/1	1-2	$50
Kansas City General Hospital ★	Kansas City, Mo.	E. L. Miller	1,150	1,150	3,377	70	2	0	0	7/1	1-3	$50
St. Mary's Hospital ★	Kansas City, Mo.	M. J. Owens and J. R. McVay	1,454	290	.....	47	1	0	0	7/1	1	$50
Barnes Hospital ★	St. Louis	E. A. Graham	1,461	.....	4,107	33	1	8	0	7/1	1-3	$75
De Paul Hospital ★	St. Louis	J. W. Thompson	1,705	.....	680	19	1	1	0	7/1	1-2	$50
Homer G. Phillips Hospital ★[1]	St. Louis	R. Elman	2,514	.....	11,624	18	1	3	0	7/1	1-3	$75
Jewish Hospital ★	St. Louis	M. W. Myer	1,354	250	3,354	17	1	1	0	7/1	1+	$35
Missouri Baptist Hospital ★	St. Louis		1,950	.....	..	1	0	0	0	7/1	1	$50
St. Louis City Hospital ★	St. Louis	P. Heinbecker	1,953	1,953	10,514	173	3	7	0	7/1	1-3	$50
St. Luke's Hospital ★	St. Louis	E. V. Mastin	2,366	.....	4,501	43	0	1	0	7/1	1	$50
St. Mary's Group of Hospitals ★	St. Louis	L. Rassieur	2,465	1,098	11,287	52	0	0	6	7/1	3	$25
Creighton Memorial St. Joseph's Hospital ★	Omaha	C. McMartin	1,183	366	373	11	..	..	..	7/1	1-2	$45
Cooper Hospital ★	Camden, N. J.	P. M. Mecray and I. E. Deibert	1,625	.....	22,650	36	1	0	0	11/1	3	$100
Jersey City Hospital ★	Jersey City, N. J.		4,207	3,155	24,997	36	1	3	0	10/1	2-3	$100
Mountainside Hospital ★	Montclair, N. J.	F. D. Stubbler	3,519	968	8,651	13	1	0	0	7/1	1+	$100
Burlington County Hospital ★	Mount Holly, N. J.	W. E. Lee	1,315	.....	2,836	32	1	0	0	7/1	2-3	$100
Albany Hospital ★	Albany, N. Y.	J. L. Donhauser	2,866	705	7,405	53	1	2	0	7/1	1	$25
Coney Island Hospital ★	Brooklyn	D. A. McAteer	2,333	2,333	39,288	41	1	1	0	8/1	1	$100
Cumberland Hospital ★	Brooklyn	M. N. Foote	4,821	4,821	46,104	24	1	0	0	7/1	1	$18
Jewish Hospital ★[1]	Brooklyn	L. W. Dunhoff	2,169	624	6,486	45	1	3	1	8/1	4	$35
Kings County Hospital ★	Brooklyn	J. Tenopyr and R. Barber	14,591	14,591	51,673	122	3	3	0	7/1	2	$18
Long Island College Hospital ★	Brooklyn	E. Goetsch	2,113	1,630	16,064	12	1	3	0	7/1	5-6	$23
Norwegian Lutheran Deaconesses' Home and Hospital ★[1]	Brooklyn		1,330	.....	18,747	..	1	0	0	7/1	1	None
St. Mary's Hospital ★	Brooklyn	W. V. Pascual	1,321	635	4,823	15	1	0	0	7/1	1	$40
Buffalo General Hospital ★	Buffalo		2,403	995	2,395	63	1	4	0	7/1	1-2	$25
Deaconess Hospital ★	Buffalo		2,632	.....	802	38	1	0	0	7/1	1	$100
Edward J. Meyer Memorial Hospital ★	Buffalo	H. A. Smith	1,699	1,699	11,240	41	2	2	0	7/1	3-5	$50e
Millard Fillmore Hospital ★	Buffalo	A. H. Clark	2,026	207	676	27	1	1	0	7/1	1	$25
Clifton Springs Sanitarium and Clinic[1]	Clifton Springs, N. Y.	A. S. Taylor	716	716	.....	12	1	0	0	7/1	1-3	$50
Mary Imogene Bassett Hospital ★	Cooperstown, N. Y.	M. A. McIver	.....	.....	.....	..	1	0	0	7/1	1	$25
Meadowbrook Hospital ★	Hempstead, N. Y.	C. A. Hettenheimer and A. S. Warinner	2,103	2,103	.....	62	2	0	0	7/1	1	$50
Mary Immaculate Hospital ★	Jamaica, N. Y.	F. N. Dealy	1,866	.....	1,889	54	1	0	0	7/1	1	None
Queens General Hospital ★[1]	Jamaica, N. Y.	F. N. Dealy	4,052	4,052	18,606	154	1	1	0	7/1	1	$18
Charles S. Wilson Memorial Hospital ★	Johnson City, N. Y.	F. G. Moore	2,094	.....	.....	18	1	0	0	7/1	3	$75
Bellevue Hospital ★[1]	New York City	H. M. Smith	10,775	10,775	64,069	159	2	0	0	1/1&7/1	1	$83
Flower and Fifth Avenue Hospitals ★	New York City	L. R. Kaufman	2,446	523	6,041	10	2	4	0	7/1	1	$25
Harlem Hospital ★[1]	New York City	L. Ginzburg	5,491	5,491	33,958	16	1	1	0	1/1&7/1	1	$18
Hospital for Special Surgery	New York City	C. G. Burdick	1,913	606	5,431	12	1	2	0	Quart.	1	$30
Lenox Hill Hospital ★	New York City		.....	1,886	7,457	44	2	0	0	1/1	2	$40
Metropolitan Hospital ★[1]	New York City	J. H. Fobes	1,821	1,821	11,027	31	2	0	0	7/1	1+	$100
Montefiore Hospital for Chronic Diseases ★	New York City	S. Standard	110	34	.....	10	1	2	0	1/1&7/1	1	$25
Mount Sinai Hospital ★[1,10,23]	New York City		.....	.....	24,951	..	3	4	0	1/1&7/1	1-2	$50
New York City Hospital ★	New York City	L. W. Crossman	1,943	1,943	7,788	36	1	1	0	7/1	1	None
New York Hospital ★	New York City	G. J. Heuer	4,867	4,867	43,003	59	3	16	0	7/1	1-6	$25
New York Infirmary for Women and Children ★[2]	New York City	A. Hubert	1,012	645	11,020	1	1	0	0	7/1	1	$45
New York Polyclinic Medical School and Hospital ★	New York City		1,617	.....	8,011	8	8	0	0	Quart.	2	None
New York Post-Graduate Medical School and Hospital ★	New York City	T. H. Russell	4,261	1,438	41,664	37	3	14	0	1/1&7/1	1-3	None
Presbyterian Hospital ★[1]	New York City	A. O. Whipple	3,569	2,081	59,476	..	2	16	0	1/1&7/1	1-4	None
St. Luke's Hospital ★	New York City	F. MacFee	3,136	2,060	17,162	50	2	8	0	7/1	5	$25
Geneseo Hospital ★	Rochester, N. Y.	C. Sumner	2,288	687	4,484	50	1	2	0	7/1	1	$41
Rochester General Hospital ★	Rochester, N. Y.	W. Wooden	4,720	1,822	7,080	69	2	1	0	7/1	2	$50
St. Mary's Hospital ★	Rochester, N. Y.	L. F. Simpson	1,930	772	3,486	16	1	0	0	7/1	1	$125
Strong Memorial and Rochester Municipal Hospitals ★	Rochester, N. Y.	J. J. Morton	2,566	1,924	15,288	131	1	7	0	7/1	1-4	$42
Hospital of the Good Shepherd ★	Syracuse, N. Y.	A. G. Swift	2,091	1,073	.....	57	1	2	0	7/1	1	$42
Grasslands Hospital ★	Valhalla, N. Y.	G. C. Adie	647	647	3,458	47	1	2	0	7/1	1-3	$75
Duke Hospital ★[1]	Durham, N. C.	D. Hart	1,825	1,551	10,367	25	1	8	10	7/1	1-7	None
Watts Hospital ★	Durham, N. C.	D. Robertson	1,875	422	3,826	19	1	2	0	7/1	1	$65
Rutherford Hospital	Rutherfordton, N. C.	M. H. Biggs	947	947	5,790	4	1	0	0	7/1	1	$50
City Hospital ★	Winston-Salem, N. C.	W. L. Grimes	3,659	1,178	4,999	32	2	2	0	7/1	3	$50
Trinity Hospital ★	Minot, N. D.	A. L. Cameron	912	.....	.....	17	1	0	0	7/1	1-3	$50
City Hospital ★	Akron, O.		5,212	.....	2,052	68	4	1	0	7/1	3	$55
St. Thomas Hospital ★	Akron, O.	E. C. Banker	1,773	.....	59	18	1	0	0	7/1	1	$50
Mercy Hospital ★	Canton, O.	A. W. Warren	3,143	292	.....	30	1	0	0	7/1	1	$85
Christ Hospital ★	Cincinnati	R. A. Shank	2,295	178	2,111	47	2	0	0	6/25	1	$75
Cincinnati General Hospital ★	Cincinnati	M. R. Reid	3,366	3,366	26,287	95	2	14	0	9/1	1-6	*
Deaconess Hospital ★	Cincinnati	W. R. Griess	2,642	180	.....	17	1	0	0	7/1	1	$75
Good Samaritan Hospital ★	Cincinnati	J. L. DeCourcy	7,632	2,579	880	42	1	2	1	7/1	1-4	$35
Jewish Hospital ★	Cincinnati	J. L. Ransohoff	2,579	241	.....	18	2	0	0	7/1	1-2	$45
City Hospital ★	Cleveland	C. H. Lenhart	2,613	2,613	21,107	88	6	10	0	7/1	1-5	$40
Cleveland Clinic Foundation Hospital	Cleveland	G. W. Crile	2,490	.....	.....	44	0	0	9	7/1	1-3	$55
Mount Sinai Hospital ★[1]	Cleveland	Strauss	1,900	361	3,785	16	2	0	0	7/1	1	$60
St. Alexis Hospital ★	Cleveland	J. F. Corrigan	4,115	740	9,569	63	4	0	0	7/1	2	$33
St. John's Hospital ★	Cleveland	G. P. O'Malley	1,657	.....	.....	7	4	0	0	7/1	1-2	$40
St. Luke's Hospital ★	Cleveland	D. M. Glover	2,447	931	2,720	31	2	1	0	7/1	3	$50
St. Vincent Charity Hospital ★	Cleveland	O. A. Weber	4,744	.....	17,793	69	1	3	0	7/1	1-4	$50
University Hospitals ★[1]	Cleveland	C. Lenhart	5,169	1,799	18,861	80	5	4	1	7/1	2	$25
Starling-Loving University Hospitals ★[1]	Columbus, O.	V. A. Dodd	1,536	.....	5,082	43	1	3	0	7/1	1-5	$25
Miami Valley Hospital ★	Dayton, O.	H. Huston	3,977	601	.....	33	1	0	0	7/1	1+	$75
Huron Road Hospital ★	East Cleveland, O.	H. L. Frost	2,192	85	2,185	25	1	1	0	7/1	1-3	$40
Lucas County General Hospital ★	Toledo, O.	F. J. McCormick	1,814	1,814	13,744	21	1	0	0	7/1	1	$50
St. Elizabeth's Hospital ★	Youngstown, O.	J. M. Ranz	1,985	.....	352	6	1	1	0	7/1	1-2	$50
St. Anthony Hospital ★	Oklahoma City	R. M. Howard	4,130	460	.....	17	1	1	0	7/1	1	$50
University Hospitals ★	Oklahoma City	R. M. Howard	1,206	1,178	3,640	53	1	1	0	7/1	1	$60
University of Oregon Medical School Hospitals and Clinics ★	Portland	T. Joyce	1,541	1,541	11,128	59	1	2	0	7/1	3	$40
Abington Memorial Hospital ★	Abington, Pa.	D. B. Pfeiffer	2,458	.....	3,532	46	1	1	0	7/1	2	$13

Numerical and other references will be found on page 788.

25. SURGERY—(Continued)

		Chief of Service	Inpatients Treated	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
St. Luke's Hospital *	Bethlehem, Pa.	W. L. Estes, Jr.	2,128	.....	804	16	1	0	0	7/1	2	$25
George F. Geisinger Memorial Hospital *	Danville, Pa.	H. L. Foss	2,063	.....	12,162	32	1	0	0	7/1	1-2	$50
Germantown Dispensary and Hospital *	Philadelphia		3,594	2,007	35,533	20	1	0	0	8/1	1-3	$110
Graduate Hospital of the University of Pennsylvania *	Philadelphia	W. E. Lee and W. Bates	1,253	1,253	19,666	29	2	0	0	7/1	2	None
Hahnemann Hospital *	Philadelphia	G. A. Van Lennep	2,650	.....	12,255	32	0	2	0	9/1	2	$50
Hospital of the University of Pennsylvania *	Philadelphia	E. L. Elliason	2,421	.....	7,951	18	0	0	7	7/1	5	None
Jefferson Medical College Hospital *	Philadelphia	T. A. Shallow and G. P. Muller	3,920	.....	22,495	103	2	0	2	9/1	1	$50
Jewish Hospital *[1]	Philadelphia	M. Behrend	3,572	.....	3,270	69	1	0	0	6/15	1-2	None
Pennsylvania Hospital *	Philadelphia	J. B. Flick and W. E. Lee	1,741	1,554	23,944	31	2	0	0	10/1&11/1	1-3	$20
Philadelphia General Hospital *[1]	Philadelphia		3,681	3,681	12,753	..	1	0	1	7/1&8/1	1-2	$100
Temple University Hospital *[1]	Philadelphia	W. W. Babcock	1,747	1,747	1,886	37	3	0	0	9/1	3	$40
Woman's Hospital *[2]	Philadelphia	C. M. Smyth and H. Sutley	791	.....	3,528	0	1	0	0	7/1	3	$25
Allegheny General Hospital *	Pittsburgh	O. C. Gaub	2,409	1,523	12,747	20	1	0	0	9/1	1	$85
Children's Hospital [1]	Pittsburgh	E. W. Meredith and W. O. Sherman	521	471	1,843	4	0	1	0	9/1	1	$35
Mercy Hospital *	Pittsburgh	J. P. Griffith	3,622	.....	.....	15	1	0	0	9/1	1-3	$50
Montefiore Hospital *	Pittsburgh	C. A. Hill and H. Frankenstein	1,333	347	7,624	20	1	0	0	9/1	1-3	$50
St. Francis Hospital *	Pittsburgh		2,736	2,643	2,676	18	1	1	0	9/1	1-2	$65
Reading Hospital *	Reading, Pa.	M. A. Lobkicher	1,320	616	5,395	53	1	0	0	9/1	1	$83
Robert Packer Hospital *	Sayre, Pa.	D. Guthrie	1,188	1,161	2,883	16	0	0	2	9/1	2	$50
Roper Hospital *	Charleston, S. C.	R. S. Catheart	1,722	1,205	9,464	32	1	2	1	7/1	1-3	$10
Baroness Erlanger Hospital *	Chattanooga, Tenn.	H. Laws, Jr.	3,326	1,821	2,035	35	2	2	0	7/1	1-2	$40
John Gaston Hospital *	Memphis, Tenn.	J. L. McGehee	2,554	.....	12,908	23	1	1	0	7/1	1	$33
George W. Hubbard Hospital of Meharry Medical College *[1]	Nashville, Tenn.	J. H. Hale	703	.....	6,934	12	1	0	0	7/1	2	$75
Nashville General Hospital *	Nashville, Tenn.	J. A. Kirtley	1,459	1,421	17,390	27	1	2	0	7/1	1-2	$35
Vanderbilt University Hospital *[1]	Nashville, Tenn.	B. Brooks	1,965	1,585	20,782	55	1	6	0	7/1	1+	$35
Baylor University Hospital *	Dallas, Tex.	C. B. Carter	2,063	264	2,243	9	1	1	0	7/1	1-2	$18
Parkland Hospital *[1]	Dallas, Tex.	L. Hudson	2,817	.....	2,872	56	4	0	0	1/1&7/1	2	$25
John Sealy Hospital *[1]	Galveston, Tex.	A. O. Singleton	1,306	.....	6,374	38	1	2	0	7/1	1-3	$25
Southern Pacific Hospital	Houston, Tex.	J. L. Taylor	837	837	3,300	12	1	0	0	7/1	1-2	$100
University of Virginia Hospital *	Charlottesville, Va.	E. P. Lehman	1,706	1,706	7,337	36	1	5	0	7/1	1	$83
Chesapeake and Ohio Hospital	Clifton Forge, Va.	J. M. Emmett	2,693	——	200	11	2	0	0	Varies	2	$50
Norfolk General Hospital *	Norfolk, Va.		1,656	.....	1,364	31	1	0	0	7/1	1-2	$50
Medical College of Virginia, Hospital Div. *	Richmond	I. A. Bigger	2,396	.....	12,020	47	2	5	0	7/1	1	$25
Jefferson Hospital *	Roanoke, Va.	H. H. Trout	1,533	.....	3,832	34	1	1	0	7/1	1	$50
King County Hospital *[13]	Seattle	R. J. O'Shea	2,258	2,258	25,840	73	1	0	0	7/1	1	$125
Charleston General Hospital *	Charleston, W. Va.	J. E. Cannaday	2,076	.....	1,124	16	1	3	0	7/1	1-3	$5
Laird Memorial Hospital	Montgomery, W. Va.	W. R. Laird	759	.....	994	20	1	2	0	1/1	1-2	$100
State of Wisconsin General Hospital *[1]	Madison	E. R. Schmidt	2,957	.....	2,654	55	2	6	0	7/1	3	$25
Columbia Hospital *	Milwaukee	S. J. Seeger	527	19	398	14	1	0	0	7/1	4	$25
Milwaukee Children's Hospital	Milwaukee	L. L. Anderson	2,060	.....	12,122	6	1	0	0	7/1	1	$50
St. Joseph's Hospital *	Milwaukee	F. A. Stratton	5,304	2,745	2,659	32	1	0	0	6/15	1-2	$40
St. Mary's Hospital *	Milwaukee	W. C. F. Witte	2,424	.....	.....	19	1	0	0	7/1	1	$80
Milwaukee County Hospital *[1]	Wauwatosa, Wis.	J. King	3,734	3,734	17,132	40	3	2	0	7/1&7/15	1	$50

26. THORACIC SURGERY

Olive View Sanatorium	Olive View, Calif.	J. Skillen	283	283	.....	..	3	0	0	Varies	1+	$350
Norwich State Tuberculosis Sanatorium (Uncas-on-Thames)	Norwich, Conn.	R. G. Urquhart	393	393	.....	6	1	0	0	7/1	2	$175
City of Chicago Municipal Tuberculosis Sanitarium	Chicago	R. M. Davison	255	255	.....	..	1	1	0	1/1	1-2	$100
Sanat. Division of the Boston City Hospital	Boston	H. Binney	1,070	1,070	312	..	1	0	0	Varies	1+	$150
University Hospital *[1]	Ann Arbor, Mich.	J. Alexander	439	.....	1,055	13	2	0	0	7/1	1-2	$25
Barnes Hospital *	St. Louis	E. A. Graham	260	.....	.....	19	0	1	1	7/1	1	$100
Hudson County Tuberculosis Hospital	Jersey City, N. J.	F. Bortone	224	224	.....	3	1	1	0	7/1	1+	$100
Kings County Hospital *	Brooklyn	E. J. Grace	281	281	483	14	1	0	0	7/1	1	$100
Edward J. Meyer Memorial Hospital *	Buffalo	H. A. Smith	54	54	.....	7	1	0	0	7/1	3	$50
Herman M. Biggs Memorial Hospital [1]	Ithaca, N. Y.	E. Butler	408	408	5,125	5	0	0	1	Varies	1-1½	$100
Mount Morris Tuberculosis Hospital	Mount Morris, N. Y.	E. F. Butler	143	143	.....	1	1	0	0	7/1	1-2	$135
Bellevue Hospital *[1]	New York City	F. B. Berry	.....	.....	.....	..	4	0	0	1/1&7/1	1½	$100
Metropolitan Hospital *[1]	New York City	S. A. Thompson	186	.....	1,912	2	1	0	0	7/1	1+	$75
Homer Folks Tuberculosis Hospital	Oneonta, N. Y.	J. M. Chamberlain	219	.....	25	9	0	1	0	Varies	1+	$100
Sea View Hospital [1]	Staten Island, N. Y.	H. R. Davidson	1412	.....	.....	20	3	2	0	1/1&7/1	2	$100
City Hospital *	Cleveland	C. H. Lenhart	.....	.....	.....	..	1	0	0	7/1	1	$80
University of Oregon Medical School Hospitals and Clinics *	Portland	R. Matson	157	157	2,984	11	1	2	0	7/1	3	$40
Muirdale Sanatorium	Wauwatosa, Wis.	F. Rainé and J. D. Steele	282	282	48	6	1	0	0	Varies	1-2	$125

27. TRAUMATIC SURGERY

Morrisania City Hospital *	New York City	G. E. Milani	2,549	2,549	14,335	28	1	1	0	1/1&7/1	1	$18
Charleston General Hospital *	Charleston, W. Va.	H. S. Swart	1,064	.....	392	7	1	0	0	7/1	1-3	$25

28. TUBERCULOSIS

Los Angeles Sanatorium [1]	Duarte, Calif.	J. Rosenblatt	123	123	180	14	2	0	0	Varies	1+	$100
Arroyo-Del Valle Sanatorium [1]	Livermore, Calif.	C. Bush	516	516	794	4	1	0	0	7/1	1	$50
Barlow Sanatorium [1]	Los Angeles	H. W. Bosworth	171	171	1,569	1	1	0	0	7/1	1	$100
Los Angeles County Hospital *[1]	Los Angeles	C. Howson	922	922	4,225	142	3	0	0	Varies	1+	$175
Pottenger Sanatorium and Clinic [1]	Monrovia, Calif.	F. M. Pottenger	240	.....	2,438	4	1	0	0	7/1	1	$50
Bret Harte Sanatorium	Murphys, Calif.	E. P. Smart	404	85	106	0	2	0	0	7/1	2	$150
Olive View Sanatorium [1]	Olive View, Calif.	W. G. Winter	1,701	1,701	.....	21	2	0	0	Varies	1+	$115
San Diego County General Hospital *	San Diego, Calif.	R. S. Schneiders	286	286	2,247	..	1	0	0	7/1	1	$125
San Francisco Hospital *[1]	San Francisco	S. J. Shipman	732	732	.....	..	4	0	1	7/1	1+	$50
Santa Clara County Sanatorium	San Jose, Calif.	C. L. Ianne	704	704	5,999	..	2	0	0	7/1	1-5	$175
Fairmont Hospital of Alameda County [1]	San Leandro, Calif.	P. Samson and H. G. Trimble	594	549	.....	46	1	0	0	7/1	1	$10

Numerical and other references will be found on page 788.

28. TUBERCULOSIS—(Continued)

	Chief of Service		Inpatients Treated [3]	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistant Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Denver General Hospital ★	Denver	C. L. Lincoln	113	113	5,839	15	1	0	0	7/1	1	$50
National Jewish Hospital	Denver	C. J. Kaufman	428	428	2,912	21	4	0	0	1/1&7/1	3	$75
Sanatorium of the Jewish Consumptives' Relief Society	Spivak, Colo.	A. Rest	368	368	1,295	13	5	0	0	Varies	3	$100
Norwich State Tuberculosis Sanatorium (Uncas-on-Thames)	Norwich, Conn.	H. B. Campbell	632	632	.....	20	1	0	0	Varies	1+	$75
Laurel Heights State Tuberculosis Sanat.	Shelton, Conn.	E. J. Lynch	676	676	3,293	28	1	0	0	Varies	1+	$75
Gaylord Farm Sanatorium [1]	Wallingford, Conn.	D. R. Lyman	337	337	500	0	2	0	0	Varies	1+	$100
Tuberculosis Sanat. (Glen Dale, Md. P. O.)	Washington, D. C.	D. L. Finucane	1,204	1,204	.....	97	1	0	0	7/1	1	$50
University of Chicago Clinics ★	Chicago	R. G. Bloch	.....	.....	821	1	1	1	1	1/1&7/1	1-2	None
Macon County Tuberculosis Sanatorium [1]	Decatur, Ill.	D. O. N. Lindberg	179	179	2,761	5	1	0	0	1/1	1-3	$100
Peoria Municipal Tuberculosis Sanatorium	Peoria, Ill.	M. Pollak	265	265	2,900	14	2	0	0	7/1	1	$125
Rockford Municipal Tuberculosis Sanat.	Rockford, Ill.	W. J. Bryan	245	245	2,870	8	1	0	0	7/1	1-3	$150
Boehne Tuberculosis Hospital [1,22]	Evansville, Ind.	P. D. Crimm	490	490	1,544	47	1	1	0	Varies	1-2	$135
Sunnyside Sanatorium	Indianapolis	F. L. Jennings	419	419	1,055	14	1	0	0	7/1	1	$100
State Sanatorium [1]	Oakdale, Ia.	J. H. Peck	713	713	884	26	1	0	0	7/1	1-2	$100
Western Maine Sanatorium [1]	Greenwood Mountain	L. Adams	319	319	315	8	1	0	0	Varies	2	$34
Baltimore City Hospitals ★	Baltimore	H. V. Langeluttig	724	724	.....	75	1	0	0	7/1	1	$12
Sanatorium Division of Boston City Hosp.	Boston	J. A. Foley	1,070	1,070	.....	47	4	4	0	Varies	1+	$83
North Reading State Sanatorium [19]	North Wilmington, Mass.	C. C. MacCorison	363	145	2,678	0	1	0	0	Varies	1	$150
Rutland State Sanatorium	Rutland, Mass.	E. B. Emerson	501	501	1,379	16	1	0	0	6/30	1	$150
Norfolk County Hospital	South Braintree, Mass.	N. R. Pillsbury	318	318	1,990	19	2	0	0	Varies	1-2	$150
Middlesex County Sanatorium [1]	Waltham, Mass.	H. D. Chadwick	663	663	16,663	31	3	0	0	Varies	1	$150
Belmont Hospital [1]	Worcester, Mass.	R. Baker	259	259	3,803	20	2	0	0	Varies	1-3	$133
University Hospital ★[1]	Ann Arbor, Mich.	J. Barnwell	175	175	810	6	1	1	0	7/1	1	$25
American Legion Hospital	Battle Creek, Mich.	W. L. Howard	357	357	.....	5	1	0	0	Varies	1+	$125
Herman Kiefer Hospital [22]	Detroit	E. J. O'Brien and B. H. Douglas	2,092	2,092	.....	102	7	0	0	7/1	1-3	$150
Michigan State Sanatorium [1]	Howell	G. L. Leslie	615	615	564	10	1	0	0	7/1&8/1	1	$125
Ingham Sanatorium	Lansing, Mich.	C. J. Stringer	297	.....	3,071	14	1	1	0	7/1	1-2	$100
Morgan Heights Sanatorium	Marquette, Mich.	R. F. Berry	183	183	597	9	1	0	0	8/1	1-2	$150
William H. Maybury Sanatorium [1]	Northville, Mich.	H. S. Willis	1,497	1,497	.....	70	9	0	0	Varies	2+	$150
Oakland County Tuberculosis Hospital	Pontiac, Mich.	G. A. Sherman	461	10	3,895	14	2	0	0	7/1	1-4	$150
Nopeming Sanatorium [1]	Nopeming, Minn.	A. T. Laird	494	494	3,649	30	2	0	0	1/1	1-2	$150
Glen Lake Sanatorium [1]	Oak Terrace, Minn.	E. S. Bariette	1,099	1,099	6,788	74	1	0	0	Varies	1+	$10
Mississippi State Sanatorium [1,22]	Sanatorium, Miss.	H. Boswell	630	630	1,575	12	2	0	0	7/1	2-3	$100
Kansas City Municipal Tuberculosis Hosp.	Kansas City, Mo.	O. C. Heyer	296	296	.....	59	1	1	0	7/1	1-3	$100
Robert Koch Hospital	Koch, Mo.	G. D. Kettelkamp	970	970	.....	75	8	0	0	7/1	1+	$100
Homer G. Phillips Hospital ★[1]	St. Louis	D. Myers	283	283	446	20	1	1	0	7/1	1-3	$75
Mount St. Rose Sanatorium	St. Louis	R. A. Kinsella	293	211	.....	15	1	0	0	7/1	1	$150
New Jersey Sanat. for Tuberculous Diseases	Glen Gardner	S. B. English	536	536	9,979	7	7	0	0	Varies	1+	$100
Hudson County Tuberculosis Hospital	Jersey City, N. J.	B. S. Pollak	951	951	13,872	24	4	4	0	7/1	1+	$100
Essex Mountain Sanatorium	Verona, N. J.	B. M. Harman	904	500	5,005	38	9	0	0	Varies	1+	$200
Albany Hospital ★	Albany, N. Y.	R. J. Erickson	197	197	1,586	32	1	0	0	7/1	1	$100
Montefiore Hospital Country Sanatorium	Bedford Hills, N. Y.	M. Pinner	256	256	.....	0	3	0	0	1/1&7/1	1+	$100
Kings County Hospital ★	Brooklyn	C. Hamilton	1,163	1,163	9,202	49	3	0	0	7/1	1	$100
Kingston Avenue Hospital [1]	Brooklyn	F. Murray	192	192	1,720	1	1	1	0	1/1&7/1	1	$18
Edward J. Meyer Memorial Hospital ★	Buffalo	D. K. Miller	541	541	5,297	62	1	0	0	7/1	3	$50
Hermann M. Biggs Memorial Hospital [1]	Ithaca, N. Y.	J. K. Deegan	468	468	5,125	21	0	0	2	Varies	1	$100
Mount Morris Tuberculosis Hospital	Mount Morris, N. Y.	N. S. Lincoln	232	232	5,147	76	3	0	0	7/1	1-2	$100
Bellevue Hospital ★[1]	New York City	J. B. Amberson, Jr.	3,006	3,006	20,573	96	8	5	0	1/1&7/1	1	$70
Lenox Hill Hospital ★	New York City	G. Thorburn	.....	168	3,581	..	1	0	0	7/1	1-2	$50
Metropolitan Hospital ★[1]	New York City	G. G. Ornstein	497	497	2,187	40	1	6	0	7/1	1+	$100
Montefiore Hospital for Chronic Diseases ★	New York City	M. Pinner	550	156	2,806	77	1	2	0	1/1&7/1	1	$25
Riverside Hospital	New York City	M. Taschman	806	806	.....	39	7	0	0	1/1	1	$100
Homer Folks Tuberculosis Hospital	Oneonta, N. Y.	R. Horton	502	502	5,160	17	2	1	0	7/1	1+	$150
Municipal Sanatorium [1]	Otisville, N. Y.	J. P. Dworetzky	959	959	.....	1	7	0	0	1/1&7/1	1-2	$120
John Cronroe County Tuberculosis Sanat.	Rochester, N. Y.	E. Bridge	696	696	15,429	49	6	0	0	7/1	1-2	$100
Sea View Hospital [1]	Staten Island, N. Y.	G. G. Ornstein	3,482	3,482	.....	112	18	1	0	1/1&7/1	1+	$100
Trudeau Sanatorium [1]	Trudeau, N. Y.	F. H. Heise	347	347	.....	2	2	3	0	Varies	1+	None
Grasslands Hospital ★	Valhalla, N. Y.	W. G. Childress	542	.....	4,482	43	3	3	0	1/1&7/1	1-3	$118
Jefferson County Sanatorium [1]	Watertown, N. Y.	S. E. Simpson	117	117	1,897	13	1	0	0	7/1	1-3	$100
North Dakota State Tuberculosis Sanat.	San Haven, N. D.	C. Northrop	709	709	410	24	1	0	0	10/1	1½	$75
Hamilton County Tuberculosis Sanat. [1]	Cincinnati		1,147	1,147	.....	80	9	0	0	7/1	1+	$150
City Hospital ★	Cleveland	J. C. Placak	1,255	1,255	3,398	71	2	0	0	7/1	1	$90
Franklin County Sanatorium	Columbus, O.	M. D. Miller	690	690	2,028	31	4	0	0	7/1	1-3	$125
Sunny Acres, Cleveland Tuberculosis Sanat.	Warrensville, O.	E. Browning	790	790	5,938	7	3	3	0	7/1	1+	$163
Eagleville Sanatorium for Consumptives [1]	Eagleville, Pa.	A. J. Cohen	366	366	7,194	2	2	0	0	Varies	1+	$125
Germantown Dispensary and Hospital ★	Philadelphia	F. M. McPhedran	166	166	3,885	7	1	0	0	8/1	1-3	$125
White Haven Sanatorium	White Haven, Pa.	F. A. Craig	514	514	.....	29	4	0	0	Varies	1+	$125
State Sanatorium	Wallum Lake, R. I.	U. E. Zambarano	916	916	5,002	28	11	0	0	Varies	1+	$150
Pine Breeze Sanatorium	Chattanooga, Tenn.	J. L. Hamilton	551	551	102	12	1	0	0	7/1	1-2	$150
Davidson County Tuberculosis Hospital	Nashville, Tenn.	R. R. Crowe	641	641	3,486	28	2	0	0	7/1	2	$150
Woodmen of the World War Memorial Hospital	San Antonio, Tex.	C. J. Koerth	200	200	.....	5	2	0	0	Varies	1	Varies
King County Tuberculosis Hospital [1]	Seattle	H. B. Kellogg	256	256	3,045	21	1	0	0	7/1	1-3	$100
Hopemont Sanitarium	Hopemont, W. Va.	A. V. Cadden	876	876	1,050	32	7	0	0	7/1	1+	$165
Wisconsin State Sanatorium [1]	Statesan	H. M. Coon	327	.....	.....	9	3	0	0	Varies	1+	$200
Muirdale Sanatorium [1]	Wauwatosa, Wis.	A. L. Banyai	1,095	1,095	2,984	18	2	0	0	Varies	1-2	$75

29. UROLOGY

Revision of list is now taking place in collaboration with the American Board of Urology

Hillman Hospital ★	Birmingham, Ala.	W. F. Scott	477	.....	51,743	8	1	0	0	7/1	1	$50
Los Angeles County Hospital ★[1]	Los Angeles	J. Negley	2,358	.....	14,539	76	6	0	0	4/1&10/1	3	$10
White Memorial Hospital ★	Los Angeles	H. C. Bumpus, Jr.	530	.....	9,455	12	1	0	0	7/1	1-3	$80
San Francisco Hospital ★[1]	San Francisco	C. M. Johnson and J. R. Dillon	850	850	.....	..	1	0	1	7/1	1	$50
Stanford University Hospitals ★	San Francisco	J. R. Dillon	412	146	13 647	3	1	0	0	7/1	2	$25
University of California Hospital ★[1]	San Francisco	H. C. Naffziger	468	176	14 417	9	1	0	0	7/1	1+	$25
New Haven Hospital ★[1]	New Haven, Conn.	C. Deming	.....	.....	3 400	6	1	0	0	7/1	1+	*
Gallinger Municipal Hospital ★	Washington, D. C.	W. P. Herbst	697	607	.....	30	1	2	0	7/1	1	$25
Grady Hospital ★	Atlanta, Ga.	M. K. Bailey and E. Floyd	609	.....	13.518	19	2	2	0	7/1	1+	$20
Michael Reese Hospital ★[1]	Chicago	H. Rolnick	607	181	234	14	1	6	0	1/1	1-2	$50
Presbyterian Hospital ★	Chicago	H. Kretschmer	994	12	.....	11	1	0	0	7/1	1½	$50
University of Chicago Clinics ★	Chicago	C. B. Huggins	.....	.....	4,870	9	0	2	0	7/1	1-2	None

Numerical and other references will be found on page 788.

29. UROLOGY—(Continued)

		Chief of Service	Inpatients Treated[3]	Service or House Cases	Outpatient Visits	Autopsies	Residents	Assistants Residents	Fellowships	Service Begins	Length of Service (Years)	Beginning Stipend
Indianapolis City Hospital *[a]	Indianapolis	R. L. Smith	572	.....	6,659	19[a]	1	0	0	7/1	1-2	$42
University Hospitals *[1]	Iowa City	N. G. Alcock	1,330	1,264	1,956	30[a]	1	0	0	7/1	1-6	$21
Charity Hospital *[1]	New Orleans	P. J. Kahle and J. G. Pratt	3,458	3,458	28,517	60	5	3	0	7/1	1-3	$35
Touro Infirmary *	New Orleans	W. A. Reed	490	.....	6,269	16	1	0	0	7/1	1	$25
Johns Hopkins Hospital *	Baltimore	H. H. Young	960	352	7,534	30	1	2	0	7/1	1-4	None
Beth Israel Hospital *	Boston	E. G. Crabtree	394	154	3,434	..	1	0	0	7/1	2-3	None
Boston City Hospital *[1]	Boston	H. H. Howard	599	599	32,720	11	1	1	0	Varies	1+	None
Lahey Clinic	Boston	E. E. Ewert	400	.....	6,000	..	0	0	1	7/1	1-3	...
Massachusetts General Hospital *[14]	Boston	G. G. Smith	680	.....	18,479	14	1	0	0	Quart.	2	$42
Massachusetts Memorial Hospitals *	Boston	S. N. Vose	.....	.....	3,505	3	1	0	0	7/1	1-3	$100[c]
University Hospital *[1]	Ann Arbor, Mich.	R. M. Nesbit	1,201	.....	7,982	25	1	0	0	7/1	1-5	$25
City of Detroit Receiving Hospital *[1,10,18]	Detroit	M. L. Martin and W. E. Keane	972	972	5,638	40	1	1	0	7/1	2	$75[c]
Harper Hospital *[14]	Detroit	F. H. Cole	510	.....	2,149	3	0	1	0	7/1	1-3	$25
Henry Ford Hospital *	Detroit	J. K. Ormond	456	.....	11,314	4	1	1	0	9/1	3	$130[c]
Eloise Hospital and Infirmary *[1]	Eloise, Mich.	W. L. Sherman	455	455	.....	44	1	1	0	7/1	1-2	$50
University Hospital *[1]	Minneapolis	C. D. Creevy	572	.....	4,049	20	0	0	1	7/1	3	$50
Mayo Foundation	Rochester, Minn.	(See below)										
Ancker Hospital *	St. Paul	F. E. B. Foley	402	.....	2,886	29	1	0	0	7/1	1	$50
Kansas City General Hospital *	Kansas City, Mo.	R. L. Hoffman	465	465	1,836	33	1	0	0	7/1	1-2	$50
St. Louis City Hospital *	St. Louis	G. Carroll	637	637	3,086	28	1	0	0	7/1	1	$100
St. Mary's Group of Hospitals *	St. Louis	C. E. Burford	546	247	4,135	10	0	0	1	7/1	3	$25
Atlantic City Hospital *[1]	Atlantic City, N. J.	C. H. deT. Shivers	122	.....	2,330	1	1	0	0	7/1	1	None
Bayonne Hospital and Dispensary	Bayonne, N. J.	S. R. Woodruff	515	479	743	..	1	1	0	1/1&7/1	1	None
Jersey City Hospital *	Jersey City, N. J.	.....	647	587	4,709	3	1	1	0	1/1&7/1	1	$75
Newark City Hospital *[14]	Newark, N. J.	C. R. O'Crowley	686	686	.....	..	1	0	0	7/1	1	$20
Albany Hospital *	Albany, N. Y.	J. E. Heslin	645	172	2,104	15	1	0	0	7/1	1	$25
Kings County Hospital *	Brooklyn	C. S. Cochrane	2,184	2,184	4,860	24	1	1	0	7/1	2	$18
Long Island College Hospital *	Brooklyn	F. L. Senger	472	297	5,522	3	1	1	0	7/1	2	$23
Buffalo General Hospital *	Buffalo	F. J. Parmenter	695	291	2,814	15	1	0	0	7/1	1-2	$25
Edward J. Meyer Memorial Hospital *	Buffalo	F. J. Parmenter	327	327	2,949	10	0	1	0	7/1	3	$50[c]
Queens General Hospital *[1,21]	Jamaica, N. Y.	F. G. Riley	921	921	25,765	31	1	1	0	7/1	1	$18
Bellevue Hospital *[1]	New York City	H. S. Jeck	1,524	1,524	16,246	18	1	0	0	1/1&7/1	1	$83
Morrisania City Hospital *	New York City	T. Townsend	762	762	4,408	18	1	3	0	1/1&7/1	2	$18
New York City Hospital *	New York City	J. H. Morrissey	336	336	1,851	9	1	0	0	7/1	1-2	$100
New York Hospital *	New York City	A. Stevens and O. Lowsley	410	410	17,592	7	2	2	0	7/1	1-3	$25
New York Post-Graduate Medical School and Hospital *	New York City	J. A. Hyams	482	268	10,621	4	1	1	0	1/1&7/1	2	$30
Presbyterian Hospital *[1]	New York City	G. F. Cahill	1,180	684	11,300	..	1	5	0	1/1&7/1	3	$21
Roosevelt Hospital *	New York City	S. A. Belsher	364	290	6,569	9	1	0	0	7/1	1-2	None
St. Luke's Hospital *	New York City	H. G. Bugbee	393	210	4,205	6	1	0	0	7/1	2	$25
Strong Memorial and Rochester Municipal Hospitals *	Rochester, N. Y.	W. W. Scott	727	545	7,603	..	0	1	0	7/1	4	$42
Sea View Hospital *[1,21]	Staten Island, N. Y.	A. J. Greenberger	324	324	.....	4	1	1	0	7/1	1+	$100
Duke Hospital *[1]	Durham, N. C.	E. P. Alyea	688	511	5,187	8	1	1	1	7/1	1-3	None
Watts Hospital *	Durham, N. C.	W. M. Coppridge	343	.....	457	5	1	0	0	7/1	1	$50
City Hospital *	Cleveland	C. H. Lenhart	341	341	6,193	24	1	0	0	7/1	1	$65
Cleveland Clinic Foundation Hospital [34]	Cleveland	W. E. Lower	699	.....	11,949	7	0	0	4	7/1	1-3	$55
University Hospitals *[1]	Cleveland	J. J. Joelson	767	435	11,048	4	1	0	0	7/1	2	$25
Starling-Loving University Hospital *[1]	Columbus, O.	W. N. Taylor	400	.....	3,826	16	1	1	0	7/1	1-2	$25
University of Oregon Medical School Hospitals and Clinics *	Portland	J. G. Strohm	449	449	8,044	11	1	2	0	7/1	3	$40
Graduate Hospital of the University of Pennsylvania *	Philadelphia	J. C. Birdsall and W. Mackinney	234	234	11,048	1	1	0	0	7/1	1	None
Hosp. of the University of Pennsylvania *	Philadelphia	A. Randall	468	.....	4,200	9	1	0	0	9/1	2	None
Pennsylvania Hospital *	Philadelphia	L. Herman	447	318	6,858	10	2	0	0	7/1&9/1	1-3	$20
Presbyterian Hospital *	Philadelphia	J. C. Birdsall	.....	249	11,048	13	1	0	0	7/1	1+	None
Mercy Hospital *	Pittsburgh	E. J. McCague	502	.....	.....	30	1	0	1	9/1	1	$300
Parkland Hospital *	Dallas, Tex.	A. I. Folsom	357	.....	4,328	14	1	0	0	7/1	1	$25
University of Virginia Hospital *	Charlottesville	S. A. Vest	424	424	3,615	3	1	1	0	7/1	1	$25
State of Wisconsin General Hospital *[1]	Madison	I. R. Sisk	635	2,000	.....	21	1	1	0	7/1	3	$25
Milwaukee County Hospital *	Wauwatosa, Wis.	R. S. Irwin	549	.....	13,982	12	2	0	0	7/1&7/15	1+	$50

Mayo Foundation Fellowships—The Mayo Foundation for Medical Education and Research, Rochester, Minnesota; D. C. Balfour, director; three-year fellowships, beginning quarterly, leading to the degree of M.S. or Ph.D. with field named from the University of Minnesota: In Anesthesia, Dermatology and Syphilology, Internal Medicine, Neurology and Psychiatry, Neurosurgery, Obstetrics and Gynecology, Ophthalmology, Orthopedic Surgery, Otolaryngology, Pathology, Pediatrics, Physical Medicine, Plastic Surgery, Proctology, Radiology, Surgery, Urology; stipend $900 per year, (clinical fellowships including pathology and radiology—268).

a. Compensation arranged by medical school and hospital.
b. Represents number of patients.
c. In lieu of maintenance.
d. Outpatient and home delivery service only.
e. Hospital facilities by affiliation.
f. Resident selected and paid by Otho S. A. Sprague Memorial Institute.
g. Room maintenance only.
h. Includes ophthalmologic patients.
j. Included otolaryngologic patients.
k. Includes two fellowships in gastroenterology.
m. Salary for fellows only. Maintenance provided residents.
n. Additional teaching material in outside clinics.
1. Residencies open to women.
2. Residencies for women only.
3. Inpatients: Numbers refer to total inpatients treated in specialty. Obstetrical admissions do not include newborns. In pathology and anesthesiology total hospital admissions are used.
4. Residency includes only dermatology.
5. Includes neurology and neurosurgery.
6. Chicago Lying-in Hospital and Dispensary, Chicago.
7. Hospital service confined to drug addicts.
8. Palmer Memorial Unit.
9. Includes neurosurgery.
10. Address all applications to superintendent.
11. Maternity service at Herman Kiefer Hospital.
12. Includes neurology.
13. Hospital appoints residents from its own house staff.
14. Includes orthopedics.
15. Includes obstetrics.
16. Applications will be considered only from men who have had a previous year's training in some recognized pathological laboratory.
17. Apply to chief of service for information about affiliating hospitals.
18. Includes proctology.
19. Admissions confined to children.
20. Separate appointments approved in roentgenology and radium therapy.
21. Includes Bradford Memorial Hospital for Babies, the Children's Hospital of Texas, and Freeman Memorial Children's Clinic, Dallas.
22. Includes thoracic surgery.
23. Private and semi-private pavilions.
24. Includes dermatology.
25. Dental as well as medical degree required.
26. Affiliated with South Bend Medical Laboratory, St. Joseph Hospital, South Bend, Elkhart General Hospital, Elkhart, and St. Joseph's Hospital, Mishawaka.
27. One resident serves six months on obstetrics.
28. Includes x-ray and radium therapy.
29. Affiliated with Free Hospital for Women, Brookline, Mass.
30. Affiliated with Bishop De Goesbriand Hospital, Burlington, and Fanny Allen Hospital, Winooski.
31. Hospital admits tuberculous patients only.
32. Approved by the Board as offering satisfactory two year training.
33. Approved by the Board as offering satisfactory three year training.
34. Data as reported for 1939.
35. Additional surgical material furnished at Worcester Hahnemann Hospital.

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SATURDAY, AUGUST 30, 1941

CERTIFICATION OF SPECIALISTS

Within little more than a generation the amazing expansion of the medical sciences has made specialization in medical practice inevitable. The medical profession itself has assumed responsibility for adequate training of specialists. Moreover, it has recognized the need for establishing mechanisms by which the public may be able to distinguish those who are competent from those who are merely "self anointed." Fifteen examining boards are now functioning, representing as many fields of medicine. These boards examine candidates and issue certificates to those who are found qualified in their respective branches. Before examination the boards require a substantial period of preparation.

Primarily, the process of certification exists in order that physicians, patients, hospitals and others may be able to identify the well trained and fully competent specialist. The conduct of these boards should never be such as to cause them to be regarded as a means of creating, for limited practitioners, a monopoly, or of protecting them from competition. Not only would certification in the specialties lose its significance if the public and the profession came to regard it merely as a measure designed to increase the influence and incomes of a small self-interested group, but the result would be inevitably the elimination of the present voluntary mechanism and the substitution therefor of some process under public control. Some of the examining boards demand that all candidates for examination limit their practice exclusively to the field in which they seek to be certified. Such exclusiveness adds nothing to the candidate's ability, which is the qualification about which the public is concerned; indeed, such limitation may interfere seriously with provision of competent medical services. A board should never adopt or enforce in practice peculiar requirements related to other qualifications than the ability and integrity of the physicians who submit voluntarily to examination.

Power is the most delicate of all the forces that man may employ; its misapplication in what is still an experimental stage in the development and functioning of the certifying boards may turn it upon them to their own harm.

CORONARY EMBOLISM

The common cause of coronary occlusion is thrombosis secondary to sclerosis of the coronary vessels. Embolism of the coronary arteries is rare. The first case of this type was described by Virchow in 1856. Saphir,[1] in an exhaustive review of the literature, collected 11 cases, to which he added 3 observations of his own. Garvin and Work [2] have encountered 3 cases of coronary embolism among 12,300 consecutive necropsies. Levy, Bruenn and Kurtz found 6 instances of embolism in a study of the records of 762 cases of coronary occlusion, Appelbaum and Nicolson 4 cases among 168, Kirschbaum 4 among 612 cases of severe disease of the coronary arteries. Coronary embolism, according to Hamman,[3] was registered at the Johns Hopkins Hospital for the first time in a period of more than fifty years in 1931, and then ten times in the succeeding nine years. Hamman believes that the condition is not nearly as rare as it was supposed to be. He estimates that from 1 to 2 per cent of the cases of coronary occlusion are due to embolism and predicts that the percentage will rise as the interest and familiarity incite more thorough investigation.

The embolic occlusion, usually single, of a large branch of a coronary vessel with its sudden and dramatic sequence, rather than the largely asymptomatic, multiple occlusions of small coronary arteries, attracts the interest of the clinician. The embolus may consist of air, fat, bacterial vegetations from heart valves, particles loosened from atheromatous lesions or broken-up thrombi. The left coronary artery and especially its left descending branch is most commonly obstructed. The common sources of emboli are endocarditic vegetations and cardiac intramural thrombi. The most frequent source of emboli is bacterial endocarditis. In the cases collected by Hamman, 50 per cent belonged to this group. The next most frequent source is to be found in the mural thrombi that occur in heart disease. Hamman points out that mural thrombi are found post mortem in 34 per cent of adults dying with heart disease, and, according to Garvin, in 25 per cent of all cases of heart disease there are mural thrombi in the left side of the heart, a condition which can give rise to coronary embolism. Other sources of embolism are a thrombus or atheromatous material in a coronary artery, a thrombus covering an arteriosclerotic plaque at the root of the aorta, thrombi in

1. Saphir, Otto: Coronary Embolism, Am. Heart J. **8**: 312 (Feb.) 1933.
2. Garvin, Curtis F., and Work, John L.: Coronary Embolism: Report of Three Cases, Am. Heart J. **18**: 747 (Dec.) 1939.
3. Hamman, Louis: Coronary Embolism, Am. Heart J. **21**: 401 (April) 1941.

the pulmonary veins, and thrombi in the peripheral veins giving rise to so-called paradoxical embolism.

Why the coronary arteries are so rarely the seat of coronary embolism has been variously explained by the difference of the calibers of the aorta and the coronary arteries, by the situation of the coronary vessels at the commencement of the aorta, the right angle at which they leave the aorta and the bulk and swiftness of the blood current at this portion, and by the fact that the larger part of coronary filling occurs in diastole. The clinical diagnosis of coronary embolism is difficult because death is usually dramatically sudden. Coronary embolism would be suggested, according to Hamman, if a patient with bacterial endocarditis was to die suddenly. Sudden death in bacterial endocarditis is usually due to coronary embolism or the rupture of a mycotic aneurysm into the pericardial cavity. However, gross cause for the sudden death may not be discovered even at necropsy. The instantaneous death so characteristic of embolism, and contrary to the not unusual observation of recovery from a complete occlusion of a branch of a coronary artery, is probably due to the fact that in the former the coronary arteries were normal, and a collateral circulation has not had time to develop. In the absence of a collateral circulation an embolus in a main branch of the coronary is apparently capable of shutting off enough of the nutrition of the heart to be responsible for the sudden death.

In contrast to the dramatic symptoms which follow occlusion of large coronary branches, the obstruction of small branches does not give rise to symptoms. Eventually symptoms of heart failure may supervene, but these are not distinctive of coronary disease. Multiple embolic occlusion of small coronary branches is observed most frequently in bacterial endocarditis and mural thrombi.

RUSH MEDICAL COLLEGE—A CENTURY OF MEDICAL EDUCATION

One hundred and four years ago in the great Northwest, medical education was like an uncharted sea. In that year the legislature of Illinois chartered a medical college. Although the village of Chicago had increased its population many times within a few years, there were no railroads, pavements, sewers or a modern public water system. The health problems were urgent. A group of eight lawyers, four business men, three physicians, and two clergymen,[1] influential in the community, then became the trustees in the act of incorporation of Rush Medical College. Dr. Daniel Brainard, the guiding spirit, had come from the East, ambitious and eager to see his profession advance. The first course of study at Rush was given in 1843 in Dr. Brainard's office on Clark near Randolph Street. In his opening address on medical education, Dr. Brainard discussed a question that has since been answered: the creation of a national board of examiners. The final words of his address were "We believe the school we this day open is destined to rank among the permanent institutions of the state. While it will pass in time into other and better hands, it will live on, identified with the interest of a great and prosperous city."

According to Norman Bridge and John E. Rhodes,[2] during the next year a college building was erected at Dearborn and Indiana streets, where a lot had been donated by generous citizens. This is the present site of the headquarters of the American Medical Association. The one story wood structure had a circular roof, an amphitheater, a dissecting room and a chemical laboratory. Part of the cost of the structure was paid by public subscription. Among the forty-six students who attended the second course of lectures, one came from the territory of Iowa and one from the territory of Wisconsin. Austin Flint, who had now become professor of the institutes and practice of medicine, in his introductory address, on "The Reciprocal Duties and Obligations of the Medical Profession and the Public," voiced many of the doctrines of ethics which later were incorporated in the code of ethics of the American Medical Association. About half of the faculty still resided, most of the year, outside the state of Illinois. After the first four years the public authorities decided to erect a public hospital which was to be under the care of the members of the faculty.

Rush Medical College now was known far beyond the state of Illinois. Dr. N. S. Davis came from New York in 1849 to be professor of physiology and pathology, and Prof. Thomas Spencer from Geneva, N. Y., to be professor of the principles and practice of medicine. In 1850 an extraordinary innovation was announced reducing the fees from $65 to $35, to enable men "who will practice medicine to properly qualify themselves." In 1857 Prof. William H. Byford of Evansville, Ind., became professor of obstetrics and diseases of women, and Dr. John H. Rauch of Burlington, Iowa, professor of materia medica and medical jurisprudence.

Then came the Civil War. Professor Brainard taught military surgery, Allen taught medicine, Ephraim Ingals medical jurisprudence, and Blaney toxicology. The public hospital was now taken over by the government for a military hospital. After the war the hospital, located at Eighteenth and Arnold streets, became the County Hospital. Ten years later a larger county hospital was built at the present location at Harrison, Wood and Polk streets.

Dr. Brainard returned from Europe in 1866 to find cholera raging in Chicago. He lectured to the college students at 5 p. m. on October 9 and was taken ill with cholera at 3 a. m. He died the following evening,

1. Weaver, George H.: Beginnings of Medical Education In and Near Chicago: The Institutions and the Men, Bull. Soc. M. History, Chicago, September 1925.

2. Bridge, Norman, and Rhodes, John E.: Rush Medical College: Historical and Biographical, Chicago, Oxford Publishing Company, 1896.

on which day one hundred other deaths from cholera occurred in Chicago. Dr. Blaney then became president of Rush, and Dr. Moses Gunn, professor of surgery at the University of Michigan, was invited to the chair of surgery. Among many other illustrious teachers have been Nicholas Senn, Christian Fenger, John B. Murphy, Bertram Sippy, Walter S. Haines, J. Nevins Hyde, Frank Billings, Truman W. Brophy, William T. Belfield and Edwin R. LeCount. Dr. Blaney was succeeded in 1871 by Prof. John W. Freer, and in that year Rush was completely destroyed in the great Chicago fire. Now homeless, Rush was permitted to use an amphitheater at the County Hospital for lectures; another school offered the use of its dissecting room. The trustees decided to rebuild Rush as near as possible to the County Hospital, and in 1876 the school moved to Harrison and Wood streets, where the two great institutions of learning and mercy have remained.

Rush took the first step in buying an adjacent lot and in building a small hospital before it was determined that the hospital was to pass under the care of the Presbyterian church. Dr. J. P. Ross, professor of clinical medicine and diseases of the chest on the Rush faculty, the founder of the Presbyterian Hospital, secured money, and the trustees in 1883 erected the first two wings of the future hospital. When the state of Illinois chartered the Presbyterian Hospital Association, Rush deeded the lot and unfinished hospital building to the hospital association. The Presbyterian Hospital, which has always been closely affiliated with the college, opened in the fall of 1884.

Rush College was united with the first university of Chicago for only a short time, and with Lake Forest University in 1887. The college became affiliated with the University of Chicago in 1898, and under a new contract the university took over the work at Rush as one of its departments in 1924. The freshmen and sophomores carried on their work in the laboratories of the University of Chicago on the south side and continued the junior and senior years on the west side in the great medical center.

Since the University of Chicago recently established a complete medical school on its south side campus, it has had for a few years two medical schools. The disposition of Rush Medical College again came up for consideration. The decisions and dispositions have been made. The facilities of Rush and its clinic are to be turned over to the Presbyterian Hospital, which in turn becomes affiliated with the University of Illinois. No longer will new students be admitted to Rush. The only students remaining are the seniors who graduate in 1942.

The name of Rush Medical College will be perpetuated, for the present, only in the board of trustees and in the titles of its staff taken into the faculty of the University of Illinois College of Medicine, where they will be designated as Rush professors. The Presbyterian Hospital staff will be appointed to the clinical staff of the University of Illinois College of Medicine. Future appointments to the Presbyterian Hospital staff will be made from persons nominated by the University of Illinois.

In a century, Rush Medical College has done much for medical education. The faculty and its thousands of graduates have been and are a distinguished group. The great medical west side that centers about Harrison and Wood streets in Chicago, where doctors and nurses are trained to care for the sick, will remain.

Current Comment

SHORTAGE OF SURGICAL INSTRUMENTS THREATENED

Difficulty is being experienced by manufacturers in obtaining materials needed for the manufacture of surgical instruments and supplies and for the manufacture of hospital apparatus and equipment, because of the urgency of the demands of the defense program. The Office of Price Administration and Civilian Supply, created by executive order April 11 and charged with the responsibility, among others, of stimulating provision of the necessary supply of materials and commodities required for civilian use in such manner as not to conflict with military defense needs, has declared it to be of the greatest importance that there be a sustained output of surgical and hospital equipment. Such output is essential "to the maintenance of industrial efficiency and civilian morale." In an effort to make effective a sustained output, the Administrator of the Office of Price Administration and Civilian Supply on July 15 announced a program that assures to the manufacturer the highest civilian preference rating in connection with any order he may place for materials for the manufacture of surgical implements and supplies and for the manufacture of hospital apparatus and equipment.[1] The announcement provides that the preferences granted under the program may not be used to accumulate excessive inventories. At the same time an announcement was made of a program that grants a similar preference rating in connection with orders for materials to be used in the manufacture of eyeglass frames and parts. The steps thus taken by the government to avert an acute shortage in these necessary articles are commendable. The hospital apparatus and equipment and the surgical implements and supplies covered by the priority program announced by the Administrator include adhesive plasters, anesthesia apparatus and supplies, biologicals, antitoxins and serums, clinical thermometers, diagnostic instruments, hospital laboratory equipment and supplies, hospital operating room equipment, hypodermic syringes and needles, surgical and dental instruments, medicinal chemicals, rubber hospital sundries, hospital sterilizers, surgical dressings, x-ray equipment and medical and dental supplies.[2]

1. Federal Register **6**: 3477 (July 16) 1941.
2. Federal Register **6**: 3776 (July 30) 1941.

MEDICAL EDUCATION AND NATIONAL DEFENSE

The health of the people is essential in any program of national defense. Its maintenance requires the services of competent physicians adequate in number. Major Gen. James C. Magee, Surgeon General of the United States Army, elsewhere in this issue [1] notes that the War Department has authorized the issuance of commissions in the Medical Administrative Corps to junior and senior medical students in good standing in recognized medical schools. Those who apply for and receive these commissions will be excluded from the operation of the Selective Service Law of 1940. Nothing, however, has been done to insure that all well qualified first and second year students, and those who have already been accepted for freshman classes starting this fall, will be permitted to pursue their medical studies without interruption. Brig. Gen. Lewis B. Hershey, director of Selective Service, it is true, has declared that there are no replacements for medical students and that they should therefore be regarded as in training for necessary vocations, but local boards have not always followed his advice. If the medical needs of the country are to be met, the training of physicians must not be curtailed. Some means must be found whereby all bona fide medical students and those accepted for enrolment this fall shall be continued in training so that they may ultimately join the ranks of the medical profession.

1. Magee, J. C.: The Military Emergency and the Medical Profession, this issue, p. 681.

DOCTORS IN COURT AND LAWYER TACTICS

Frequently physicians are requested to testify in court in behalf of governmental agencies. As public spirited citizens they do this at great sacrifice of time and energy and with no remuneration other than reimbursement for expenses. In cities such as Washington, Chicago and New York, where the Post Office Department, the Food and Drug Administration and the Federal Trade Commission are particularly active, the demands made on the time of such physicians are sometimes inordinately heavy. Government officials have said repeatedly that the enforcement of the laws administered by the agencies mentioned would hardly be possible without this generous, voluntary cooperation of the medical profession. When a physician appears in court in the performance of a civic duty he is usually treated with courtesy and respect. Most practitioners of law recognize the nature of the situation and the professional status of their colleagues in medicine. Some lawyers, however, in their zeal to win, forget the decencies. In a recent hearing before the Federal Trade Commission a number of distinguished medical scientists, Drs. A. J. Carlson, Victor C. Myers and Donald D. Van Slyke, testified for the government against claims made by the Bristol-Myers Company for its product "Sal Hepatica." The claims concerned largely the problem of acidosis. According to an account of the trial these scientists, who were there to perform a public service, were subjected to an insulting, abusive attack, endeavoring to impeach their scientific objectivity, credibility and truthfulness, and they were assailed then as to their motives and integrity. Apparently the attorneys were not content with an examination of the facts of the testimony. In this instance, it seems likely, the tactics employed will reap their just reward.

RECENT EXTENSION OF ENDEMIC TYPHUS

The origin of endemic typhus fever in the United States is still a matter of speculation. Maxcy [1] in 1928, in a report on the distribution of endemic typhus in the United States, called attention to its prevalence in the Southern states, especially Georgia, Texas, Alabama, Florida, South Carolina, North Carolina, Virginia and Maryland. It was established that the rat was the reservoir host and the rat flea the chief vector, and that the disease is to be differentiated from spotted fever. Meleney,[2] in a recent article, calls attention to the extension of the disease to new areas. The total number of cases reported since 1929 for all the Southern states from Maryland to Texas and for California shows a rapid increase up to 1933, a sudden drop in 1934 and 1935, a sharp increase in 1936 and 1937, a slight drop in 1938, and an increase in 1939 to the highest number for any one year. The most important area involves the southern part of Georgia, the southeastern part of Alabama, and southern and eastern Texas. Meleney points out further that, despite the control measures instituted in the cities known to harbor the disease, the total number of cases has gradually increased during the past few years. Attention is called particularly to the outbreak of 75 cases in Nashville, Tenn., during the summer and autumn of 1939. The largest number previously for that city in any one year was 11. The studies of Baker, McAlpine and Gill [3] in 1934 showed that the disease was spreading from the cities to the rural districts, although the highest incidence, as pointed out by Bowdoin and Boston,[4] was still in cities with populations of from two thousand five hundred to five thousand. The extension of endemic typhus in the southern United States is due primarily to the migrations of the brown rat (Rattus norvegicus) and of the tropical rat flea (Xenopsylla cheopis). The railroads and highways are the probable routes by which the reservoir of the disease migrated from the coast to the interior. In the study of the Nashville outbreak in 1939 it was found that the main focus of the disease was in granaries and other establishments close to the railroads entering the cities from the South and Southeast. The appearance of the disease in a number of new cities far from its earlier habitat constitutes a public health problem of increasing importance. The solution lies in a more rigorous rat eradication program.

1. Maxcy, K. F.: The Distribution of Endemic Typhus (Brill's Disease) in the United States, Pub. Health Rep. **43**: 3084 (Nov. 23) 1928.
2. Meleney, H. E.: Recent Extension of Endemic Typhus Fever in the Southern United States, Am. J. Pub. Health **31**: 219 (March) 1941.
3. Baker, J. N.; McAlpine, J. G., and Gill, D. G.: Endemic Typhus, Am. J. Pub. Health **24**: 1068 (Oct.) 1934.
4. Bowdoin, C. D., and Boston, R. J.: A Preliminary Report on the Practical Epidemiology and Control of Endemic Typhus Fever in Georgia, Am. J. Trop. Med. **20**: 537 (July) 1940.

MEDICAL PREPAREDNESS

In this section of The Journal each week will appear official notices by the Committee on Medical Preparedness of the American Medical Association, announcements by the Surgeon Generals of the Army, Navy and Public Health Service, and other governmental agencies dealing with medical preparedness, and such other information and announcements as will be useful to the medical profession.

EMERGENCY MEDICAL SERVICE FOR CIVILIAN DEFENSE

The following letter was mailed to all state and county medical societies and to administrators and chiefs of staff of hospitals:

In Bulletin No. 1 of the Medical Division, the U. S. Director of Civilian Defense recommends that all approved general hospitals in states along both seaboards and in industrial areas in the interior proceed without delay with the organization of a field casualty service. Hospitals which have already established emergency medical field units for this purpose should revise their organization so as to conform with the plans outlined in this bulletin. Uniformity in organization is essential if medical field units are to respond promptly and effectively to emergency calls from the local control center. The provision of special medical and surgical equipment for field units should await distribution of Bulletin No. 2 of the Medical Division, which will deal with equipment.

Most medical facilities from which the civilian defense organization in each state is to be developed are at the local level. It is therefore advisable that a local chief of Emergency Medical Services be appointed, as the first step in organizing medical facilities for civilian defense in a local area. To facilitate coordination of these facilities, official representation of the medical, public health and nursing professions on the local Medical Advisory Council is necessary. It should be the responsibility of the state Council of Civilian Defense to define defense areas around metropolitan centers and to weld these areas into cooperating units.

In the event of enemy attack, the operation of the local Emergency Medical Service may be sketched as follows: As described in "Organization for Civilian Protection," issued by the U. S. Director of Civilian Defense on July 17, air raid warnings will come to the local control center from the military establishments in the area and will be relayed to the proper civilian defense officers; information concerning the location and extent of local damage will be received by the control center from air raid wardens or others. Using a spot map showing the location of hospitals, medical supply depots, transportation centers and sites for the establishment of casualty stations and first aid posts, the control center or its substation will call out an appropriate number of Emergency Medical Field Units. To be prepared to respond promptly and effectively, emphasis should be laid in all localities on the necessity for field drills of medical units in collaboration with rescue squads, stretcher teams and other emergency relief services.

In the preparation and execution of these plans, state and local defense councils may avail themselves of the assistance of the liaison officers of the U. S. Public Health Service attached to headquarters of the Army Corps Area. In the first, second, third and ninth defense area offices, located at Boston, New York, Baltimore and San Francisco, a special medical officer will be assigned for this purpose to the area Offices of Civilian Defense. Requests for information and reports on state and local medical and public health defense activities should be addressed in duplicate to the appropriate area Office of Civilian Defense.

GEORGE BAEHR, M.D., Chief Medical Officer.

MEDICAL PROVISIONS FOR CIVILIAN DEFENSE

The activities of the U. S. Office of Civilian Defense are concerned primarily with the protection of lives and property in the event of enemy action. To its Medical Division is entrusted the responsibility for the preparation of plans for civilian defense designed to prevent or alleviate the medical and public health hazards to which the civilian population may be exposed.

This bulletin is the first of a series of recommendations to state and local directors of civilian defense concerning the augmentation of medical facilities in their area. It presents a simple basic plan for the organization of emergency medical field units related to hospitals, which can be adapted to the needs of any community. It directs attention to the possible future requirements for expansion of hospital facilities both within a community and outside its boundaries. To this end it recommends the immediate preparation of a local inventory, a report of which should be filed in duplicate with the civilian Defense Area Office. It also recommends that steps be initiated in each local area for the rapid expansion of nursing facilities through intensive training of adequate numbers of nursing auxiliaries.

To those who do not as yet appreciate the need for action, I should like to quote from a similar official bulletin issued in England in 1938 just prior to the beginning of hostilities, which describes measures for safeguarding the civilian population:

"The need for (these measures) is not related to any belief that war is imminent. It arises from the fact that the risk of attack from the air, however remote it may be, is a risk that cannot be ignored, and because preparations to minimize the consequences of attack from the air cannot be improvised on the spur of the moment but must be made, if they are to be effective, in time of peace."

Whether or not we regard danger to the lives and the property of our people as imminent, I would urge that immediate steps be taken to carry out these recommendations of the Office of Civilian Defense in every state along our seaboards and in industrial areas in the interior.

F. H. LAGUARDIA,
U. S. Director Civilian Defense.

Washington, D. C.
July 30, 1941.

MEDICAL DIVISION—BULLETIN NO. 1

Prepared by the Office of Civilian Defense, Washington, D. C.

EMERGENCY MEDICAL SERVICE

Current developments in technics of warfare leading to the possibility of unheralded bombing of civilian populations, as well as potential hazards from sabotage, make imperative the preparation of facilities for providing medical service to casualties that may result from such incidents. The need for these emergency facilities may not arise, but their organization must be a fundamental part of our civilian defense program. It is the purpose of this bulletin to outline the essentials of an emergency medical service and to describe a type of organization by which these essentials may be achieved.

The Medical Division of the Office of Civilian Defense is charged with the preparation of plans for emergency medical

service and equipment. It also maintains liaison with other federal agencies concerned with public health and medical care. In addition, an officer of the United States Public Health Service is designated to serve as medical liaison to each Civilian Defense (see map) Area Office.

Because of geographic and administrative diversity in various parts of the country, general plans are presented as recommendations to state and local defense councils for adaptation to meet the needs of the different areas. The general adoption of a common pattern in organization and equipment for civilian defense is highly desirable so that adjacent communities may pool or exchange emergency resources in time of need.

Area offices: 1. Boston. 2. New York. 3. Baltimore. 4. Atlanta, Ga. 5. Columbus, Ohio. 6. Chicago. 7. Omaha. 8. San Antonio, Texas. 9. San Francisco.

Local administrative areas for civilian defense will frequently extend beyond municipal or other political boundaries. Such administrative civilian defense areas may be defined by State Defense Councils. It is important that the Emergency Medical Service be integrated at all administrative levels with welfare, police, and other emergency services.

LOCAL CHIEF OF EMERGENCY MEDICAL SERVICE

An Emergency Medical Service should be organized as a section of the local defense organization in each area under a director responsible to the local director of civilian defense. It is recommended that the local Chief of Emergency Medical Service be a physician of broad experience and administrative capacity, such as a health officer or an experienced hospital administrator. It should be his first duty to make an inventory of the community's medical resources and facilities and to prepare local plans, develop an organization and provide for the training of personnel to carry out the functions of the Emergency Medical Service outlined below.

LOCAL MEDICAL ADVISORY COUNCIL ON CIVILIAN DEFENSE

The local Chief of Emergency Medical Service should be chairman of a medical advisory council. This council might well include the local health officer, an experienced hospital administrator, a physician recommended by the local medical society because of his technical experience and executive ability, a registered nurse and a representative of the American National Red Cross and other voluntary agencies.

EMERGENCY MEDICAL FIELD UNITS

In states on both seaboards and in vulnerable industrial areas in the interior, general hospitals, both voluntary and governmental, including veterans administration facilities and the marine hospitals of the United States Public Health Service, should organize emergency medical field units and assemble basic equipment. An emergency medical field unit should consist of two or more squads, and a physician should be appointed to command the entire unit. Squad leaders, in turn, should be designated. The size of the emergency field unit should be in proportion to the bed capacity of the parent hospital. All members of field units should be instructed in first aid, including care of burns, prevention of shock, control of hemorrhage, emergency treatment of fractures and wounds, and in the technic of decontamination.

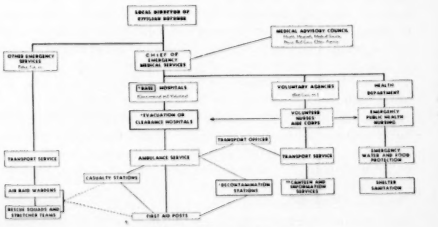
Personnel.—Small Squads: In hospitals of less than two hundred beds it is recommended that the emergency field unit consist of two squads, one for each twelve hour shift of the day. Each squad should be composed of two physicians, two or more nurses and two or more orderlies or nurses' aids and be capable of functioning, if necessary, as two separate teams. At least one unit of this size is advisable for a population up to 25,000.

Large Squads: In hospitals of more than two hundred beds the emergency field unit should consist of two squads of four doctors, four or more nurses and four or more orderlies or nurses' aids, one of the physicians in each squad to act as squad leader. Each of the squads should be on first call during a twelve hour period of the day. The personnel and equipment of a squad should be divisible into four teams capable of functioning if necessary at separate sites of disaster. At least one unit of this size, or two units with small squads, are advisable for populations up to 50,000.

In hospitals of more than three hundred and fifty beds the emergency field unit should consist of four or more large squads, each headed by a squad leader and capable of functioning if necessary as multiple teams. In these large hospitals at least two squads should be on call during each twelve hour period of the day, alternating on first call on alternate days. An emergency field unit of four large squads, or two units of two large squads each, are advisable for a population of 100,000. In large cities the desirable minimum would be four large squads (sixteen physicians and assistants) per one hundred thousand.

It will be advisable to organize physicians and nurses engaged in private practice in the area into reserve emergency field units related to hospitals. In areas with small hospitals whose resident staffs cannot be depleted, the primary emergency unit of a hospital may be made up in whole or in part of practitioners from the community.

Transportation.—A hospital ambulance, station wagon, small truck or passenger vehicle will be adequate to transport the personnel of a squad and their equipment to the site designated by the local director of civilian defense for the establishment of a casualty station. On return trips to the hospital with casualties such vehicle will be available for transportation of additional squads and equipment if required. Hospitals which do not maintain an ambulance service will find it necessary to provide for transportation, utilizing private or municipal ambulance services, small vehicles of the police, fire or other municipal departments, station wagons or passenger cars. Special racks (see separate memorandum of the Medical Division of the Office of Civilian Defense) can be installed in private ambulances and in station wagons and small trucks so that they may



FIELD OF EMERGENCY

The immediate command of all local civilian defense forces, including the medical, and the orders for emergency mobilization of these forces should be the responsibility of the person officially designated as director of civilian defense for the area. He must possess full information concerning emergency medical facilities available in the area.

* Functions projected for future organization.

** In some communities canteen, information, evacuation and rehousing services will be the responsibility of the welfare department.

be utilized in an emergency for the transportation of four or more stretcher patients at a time.

Private vehicles recruited for ambulance purposes by the American National Red Cross or other agency should be assigned to a hospital or to a designated parking center under the control of a transport officer.

Medical and Surgical Equipment.—The medical and surgical equipment for a squad should consist of a working supply for each physician's team and a reserve supply of sterile dressings and equipment in drums or packs from which the working supplies of the teams may be replenished. The working supply of each team is best carried in a portable bag, box or haversack provided with suitable compartments. A list suggesting minimum equipment will be available in a separate memorandum.

The provision of working supplies in a separate container for each physician will permit the squad of a casualty station to split off teams of one physician and assistants who can be dispatched to set up subsidiary first aid posts at other sites.

Casualty Stations and First Aid Posts.—On arrival at the site of a disaster, the squads of the emergency medical units which have responded to the appropriate alarm will set up casualty stations at the sites designated by the local director of civilian defense. The location of a casualty station should provide safety, shelter and accessibility. Stretchers, cots and blankets will have arrived in a truck carrying the rescue squad of the police, fire or other municipal department. Until released by authority of the local director of civilian defense, the physicians and nurses of the emergency medical unit should remain at their station, to which the injured will be directed or transported on stretchers by the rescue squads and volunteers enlisted by them for this purpose. The work of the casualty station is to be limited to emergency first aid procedures—the relief of pain, prevention of shock, control of hemorrhage, care of burns, application of simple splints and of surgical dressings and, not least, the preservation of morale by the establishment of confidence. The seriously injured will be evacuated as rapidly as possible by ambulance or other vehicle to a hospital. Those with minor injuries will go to their homes or to temporary shelters.

If necessary, the squad leader in charge of a casualty station may split off one or more teams of one physician and assistants, dispatching them to set up subsidiary first aid posts at other sites.

It will be advisable for the local Chief of Emergency Medical Service to prepare a spot map of the area to indicate all outpatient clinics, health centers and their substations, and all police and fire stations or other sites which could serve in an emergency as casualty stations or first aid posts. He should also maintain an inventory of available transportation.

Decontamination Stations.—A subsequent bulletin will deal with the structural requirements of decontamination stations and with details concerning the care of casualties from chemical agents.

Rescue Squads and Stretcher Teams.[1]—Casualties will be conducted on foot or transported on stretchers to the nearest casualty station or first aid post by rescue squads of the police, fire or other municipal department. These rescue squads may be assisted by air raid wardens and by volunteers enlisted at the time. Police and fire reserves should be well trained in first aid and stretcher bearing and organized into rescue squads of four or eight, headed by a squad leader. By the addition of volunteers, a rescue squad is capable of being multiplied into as many stretcher teams as there are members, each trained member becoming the leader of a team.

Provision should be made for the storage of standard stretchers, collapsible cots and blankets in designated locations, such as police and fire stations, hospitals, health centers or other suitable place. The number of standard stretchers stored in each police and fire station should be equal to the number of members of the station's rescue squads.

It will be advisable to have three times as many collapsible cots as stretchers and two blankets for every stretcher and cot. This equipment should be transported by the truck carrying the rescue squad to the site of the casualty station or first aid post.

Records.—Identification tags should be affixed to the injured by the rescue squad or else immediately on arrival at the casualty station or first aid post. A duplicate record should be kept in a book, which should be standard equipment of each medical emergency team. The record should include the name or other identification, address, person to be notified, diagnosis, first aid administered, morphine if given, and disposition. A form approved by the Medical Division of the Office of Civilian Defense will be found in a supplementary memorandum on equipment. One nurse or nurses' aide should be assigned the responsibility for these records. The forehead of tourniquet patients and of patients urgently requiring priority attention should be marked *TK* or *U*, respectively, with a red crayon skin pencil or lipstick.

Drills.—It is recommended that drills be called at each hospital once a month by the chief or president of the professional staff. A record of each drill should be kept by him, which will show the time required for complete mobilization of a squad at the designated point of departure and the condition of equipment and transportation.

It is also recommended that field drills be called unexpectedly by the local Director of Civilian Defense at least every three months for each hospital. Each field drill might appropriately include one or more rescue squads of the police, fire or other municipal department, who will assist the emergency medical squads in setting up casualty stations at designated sites. The official in command at the drills should inspect the clothing, equipment and transportation of all participating units and render a report to the Chief of Emergency Medical Service and to the local Director of Civilian Defense on the promptness and efficiency of each unit. The larger field drills might include the canteen and other emergency relief services of the welfare department or of the local chapter of the American Red Cross or other local agency.

BASE AND EVACUATION OR CLEARANCE HOSPITALS

In order to prepare for the release of hospital beds within the area for large numbers of casualties, the Chief of Emergency Medical Service should make an inventory of hospitals, convalescent homes and other institutions within a radius of 50 or more miles, to which maternity services, children's wards, certain categories of the hospitalized sick and convalescents could be transported. Provision should also be made for the assembly and storage of an adequate supply of hospital cots, mattresses, blankets and other equipment which may be required to provide for emergency increase in bed capacity of voluntary and governmental hospitals. In the event of actual destruction of hospitals, it may become necessary to consider evacuating casualties to base hospitals and transforming hospitals near the scene into evacuation or casualty clearance hospitals.

On receiving the first emergency call, the hospital should order all members of its visiting staff by telephone or police radio call to report to the hospital and stand by for the care of the injured received from the casualty stations and first aid posts.

AUGMENTATION OF NURSING SERVICES

In the face of the need for rapid expansion of nursing services for civilian defense, the number of available nurses is being depleted because of the requirements of the military forces and the public health and industrial hygiene services. An attempt is being made to compensate for this deficiency by the training of subsidiary hospital workers through the NYA, WPA and other programs. The Office of Civilian Defense in collaboration with the American National Red Cross has revised the instruction curriculum for volunteer nurses' aides so as to provide for a period of intensive practical instruction in hospitals

1. Rescue squads consist of auxiliaries of the police or fire department, who are trained and equipped for clearance and demolition work. Although their function is to extricate the injured, they have also had training in first aid and in stretcher bearing so that each member can serve as the leader of a stretcher team. Their first aid services at the time of the disaster should be restricted solely to most urgent needs such as the arrest of profuse bleeding or the application of a leg splint. Their primary object should be to remove the injured as soon as possible from the scene of danger with the aid of volunteer stretcher teams and get them to a first aid post or casualty station.

under the direction of a special instructor in charge of the training and use of volunteer nurses' aides. On completion of this practical training, volunteer nurses' aides will become eligible to assist nurses in wards and outpatient clinics of hospitals or in visiting nurse, public health, industrial hygiene and school health services. Volunteer nurses' aides are intended to supplement the work of the nurse so that she may be able to serve a greater number of patients. It is recommended that the local Chief of Emergency Medical Service in collaboration with hospital executives and principals of schools of nursing reorganize and intensify the training and the use of volunteer nurses' aides in appropria e hospitals in accordance with the new schedule of the Office of Civilian Defense and the American National Red Cross.

FIRST AID

First aid instruction should be provided for as large a part of the general population as possible. The local Chief of Emergency Medical Service should, in collaboration with the local chapter of the American National Red Cross, provide training in first aid for at least 5 per cent of the personnel of all municipal departments and large business and industrial establishments. On completion of training, this 5 per cent should constitute the first aid corps of their municipal department, business or factory group. The leaders of these corps should be encouraged to take the instructor's course of the American National Red Cross so that, when qualified, their services might be utilized for the extension of first aid instruction to all employees and to the general population of the community.

The first aid course for civilian defense prepared by the American National Red Cross in collaboration with the Office of Civilian Defense is recommended for first aid training. Instructors qualified by the Red Cross may give this training under the direction of the local chapter of the American Red Cross, the local health department or any other voluntary or governmental agency.

An intensive course of practical training (five two hour lessons) has been prepared by the Medical Division of the Office of Civilian Defense and the American National Red Cross as supplementary instruction for members of emergency medical field units and for nursing auxiliaries and members of other civilian defense units (police officers, firemen and volunteer auxiliaries) who have had previous instruction in first aid. It is designed as a refresher course for the purpose of reviewing and practicing those first aid procedures which are most important in civilian defense.

COMMITTEE ON MEDICAL PREPAREDNESS CONSIDERS ESTABLISHMENT OF PROCUREMENT AND ASSIGNMENT AGENCY

The Committee on Medical Preparedness of the American Medical Association met in Washington, D. C., August 19 and 20 to consider the resolution adopted by the House of Delegates at the session in Cleveland in June relative to the establishment of a procurement and assignment agency to be concerned with the provision of medical personnel for the Army, Navy, Public Health Service and other agencies. The committee considered also other problems presented by the physicians, such as the question of the inventory of the medical profession, deferment of medical students, interns and residents, provision of personnel for the Selective Service boards and reimbursement of such physicians, the conduct of the survey of selectees with regard to the problem of rehabilitation, and other related problems. On August 19 a dinner was held for further discussion of such problems, including as representatives of the Committee on Medical Preparedness:

Dr. Irvin Abell
Chairman of the Health and Medical Committee in the Federal Security Administrator's Office
Chairman, Committee on Medical Preparedness

Dr. Arthur W. Booth
Chairman, Board of Trustees of the American Medical Association
Member, Committee on Medical Preparedness

Dr. Frank H. Lahey
President, American Medical Association
Member, Committee on Medical Preparedness

Dr. Fred W. Rankin
President-Elect, American Medical Association
Member, Committee on Medical Preparedness

Dr. Olin West
Secretary, American Medical Association
Member, Committee on Medical Preparedness

Dr. Morris Fishbein
Editor of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION
Member, Committee on Medical Preparedness

Dr. Walter G. Phippen
Member, Committee on Medical Preparedness

Dr. James E. Paullin
Member, Committee on Medical Preparedness

Dr. John H. O'Shea
Member, Committee on Medical Preparedness

Dr. Charles A. Dukes
Member, Committee on Medical Preparedness

Dr. Roy W. Fouts
Member, Committee on Medical Preparedness

Dr. Harvey B. Stone
Member, Committee on Medical Preparedness

Dr. Samuel E. Thompson
Member, Committee on Medical Preparedness

Dr. R. G. Leland
Director, Bureau of Medical Economics, American Medical Association

Mr. Watson B. Miller
Assistant to the Federal Security Administrator

Dr. Warren F. Draper
Assistant Surgeon General, United States Public Health Service

Dr. James A. Crabtree
Surgeon, United States Public Health Service
Secretary, Health and Medical Committee in the Federal Security Administrator's Office

Dr. L. G. Rowntree
Medical Director, Selective Service System

Rear Admiral Ross T. McIntire
Surgeon General, United States Navy

Capt. Luther Sheldon Jr.
United States Navy Medical Corps

Comdr. Joseph J. Kaveney
United States Navy Medical Corps

Col. George F. Lull
United States Army Medical Corps

Dr. James C. Magee
Surgeon General United States Army Medical Corps

NAVY MEDICAL OFFICERS INTERCHANGE DUTY

The Navy Department, August 1, announced the following changes of station for three captains of the Medical Corps:

Capt. Clarence J. Brown, M. C., U. S. Navy, from the U. S. Naval Academy, Annapolis, Md., to the U. S. Naval Station, Guantanamo, Cuba, where he will be senior medical officer.

Capt. Oscar Davis, M. C., U. S. Navy, from the Norfolk Naval Hospital, Portsmouth, Va., to the U. S. Naval Academy, Annapolis, Md., where he will be in charge of eye, ear, nose and throat work.

Capt. James F. Hooker, M. C., U. S. Navy, from the U. S. Naval Station, Guantanamo, Cuba, to the Norfolk Naval Hospital, Portsmouth, Va., where he will be in charge of eye, ear, nose and throat work.

OFFICERS AT STATION HOSPITAL AT FORT SHERIDAN

The following medical reserve officers were reported on duty at the Station Hospital, Fort Sheridan, Ill., May 29:

BECKER, Harry G., Captain.
BURKHART, Jean M., 1st Lieut.
BUSHNELL, Lowell F., 1st Lieut
DOUD, Ernest A., 1st Lieut.
FISHER, Seymour, Captain.
HO, Kwan Heen, Major.
JOSSELYN, Livingston E., 1st Lieut.
KLIGERMAN, Sidney, 1st Lieut.
MAMMOSER, Lambert F., Captain
McKINLEY, Hugh A., Captain.
MILLER, Herbert P., Lieut. Col.
MUMLER, William C., 1st Lieut.
PEARSON, Emmet F., Captain.
SCHIFF, Joseph H., 1st Lieut.
SWIONTKOWSKI, Stanley D., Captain
VOLLMAR, George K., 1st Lieut.
WAFFLE, Robert L., Captain.
ZOLT, Nathan, 1st Lieut.

CORRECTION

Lieutenant Colonel Brodkin on Active Duty.—The name of Lieut. Col. Henry A. Brodkin of the New Jersey National Guard was inadvertently omitted from the list of National Guard Medical Officers in active service from New Jersey as published in THE JOURNAL, July 26, page 299. Lieutenant Colonel Brodkin, who is from Newark, has been serving with the 44th Division at Fort Dix, New Jersey, since last September.

ARMY RESERVE OFFICERS ORDERED TO ACTIVE DUTY

WAR DEPARTMENT

The following additional medical reserve corps officers have been ordered to extended active duty by the War Department, Washington, D. C.:

ABRAMSON, Samuel R., 1st Lieut., New Orleans.
ALLEY, Leon Arthur, Major, Middleboro, Mass.
ANDRUS, Frederick Henry, 1st Lieut., Akron, Ohio.
AVERY, Noyes Latham, Jr., 1st Lieut., Grand Rapids, Mich.
BALKIN, Samuel G., Captain, Minneapolis.
BLUMSTEIN, Charles Lewis, 1st Lieut., New Orleans.
BRADSHAW, Frederick Joseph, Captain, St. Cloud, Minn.
BRADY, George Clark, 1st Lieut., Buffalo.
BROWN, Delmer Jenckes, 1st Lieut., Takoma Park, Md.
CAPRIO, Frank Samuel, Captain, Northport, L. I., N. Y.
CARTER, William Howard, 1st Lieut., Ravenna, Ohio.
CRAIG, Paul C., Captain, Reading, Pa.
DEES, James Gordon, Captain, Philadelphia, Miss.
DINGMAN, Reed Othelbert, 1st Lieut., Ann Arbor, Mich.
EMERY, Wilfred Hilton, 1st Lieut., Los Angeles.
EVANS, Jack McCallum, 1st Lieut., Kenmore, N. Y.
FAWCETT, Robert Miles, 1st Lieut., Pittsburgh.
FIORITO, Joseph Anthony, 1st Lieut., Syracuse, N. Y.
FURZE, William Everett, 1st Lieut., Fresno, Calif.
GARTLAN, Bernard Walter, 1st Lieut., Washington, D. C.
GEARHART, Merriam, 1st Lieut., Philadelphia.
GIBSON, Walcatt Wilfred, 1st Lieut., Washington, D. C.
GILBERT, Wallace Guy, 1st Lieut., Los Angeles.
GIST, Harold Howard, 1st Lieut., Cleveland.
GROSS, Norman Harold, 1st Lieut., Salt Lake City.
HAMPTON, Hiram Phillip, 1st Lieut., Rochester, Minn.
HEID, George J., Jr., 1st Lieut., Reading, Pa.
HITCHKO, Michael Joseph, 1st Lieut., West Los Angeles, Calif.
JARRETT, John Tallman, 1st Lieut., Richmond, Va.
JOHANSON, Vincent Eric, 1st Lieut., San Francisco.
KAMMER, Walter Fred, 1st Lieut., New Gharus, Wis.
KIBBY, Sydney V., Lieut. Colonel, Los Angeles.
KIMBROUGH, Robert Cooke, Jr., 1st Lieut., Ann Arbor, Mich.
KLINE, Edward Mahon, Captain, Cleveland Heights, Ohio.
LANGNER, Charles A. G., Captain, Brownsville, Texas.
LAUGHLIN, Victor Cavanna, Major, Cleveland.
LEEDE, William Edward, 1st Lieut., Madison, Wis.
LOVGREN, Robert Ellsworth, 1st Lieut., Omaha.
MADDING, Gordon Francis, 1st Lieut., Rochester, Minn.
MANLY, Wilbur Francis, 1st Lieut., Chicago.
MAY, Stanton Bonham, 1st Lieut., Los Angeles.
MEASE, William Harvey, 1st Lieut., East Pittsburgh, Pa.
MEISENBACH, Albert Edward, Jr., 1st Lieut., Washington, D. C.
MELYN, John Anthony, 1st Lieut., Chicago.
MEREDITH, Thomas Neil, 1st Lieut., Pittsburgh.
NEALON, William Kennedy A., 1st Lieut., Pittsburgh.
OSBOURN, Raymond Allen, 1st Lieut., Washington, D. C.
OVERTON, Lewis Marvin, Captain, Des Moines, Iowa.
PATTERSON, Donald Scott, 1st Lieut., Brooklyn.
REYNOLDS, Stephen, 1st Lieut., Santa Barbara, Calif.
RICE, Earl Milford, Major, Charleston, S. C.
RIECHEL, Leslie, 1st Lieut., Los Angeles.
ROMANSKY, Monroe James, 1st Lieut., Hartford, Conn.
RUTHERFORD, Robert B., 1st Lieut., Peoria, Ill.
RUUSKA, Paul E., 1st Lieut., Richmond, Va.
SCHWARZ, Alfred J., Captain, San Anselmo, Calif.
SCHWEITZER, Julius Paul, 1st Lieut., Toledo, Ohio.
SECUNDA, Lazarus, Captain, Brighton, Mass.
SELLING, Philip, 1st Lieut., Portland, Ore.
SKOLFIELD, Mazel, Captain, Salt Lake City.
SNYDER, Maurice Wilson, 1st Lieut., Manor, Pa.
STEHR, Vernon Carl, 1st Lieut., Oakland, Calif.
SUNDQUIST, Everett Lloyd, 1st Lieut., Springfield, Ore.
SVOBODA, Frank Charles, Major, San Diego, Calif.
TRUMP, Frank Austin, Captain, Ottawa, Kan.
VINCENT, Bayard Richard, 1st Lieut., New York.
WEED, John Conant, 1st Lieut., New Orleans.
WERNER, Samuel, 1st Lieut., Billings, Mont.
WILLIAMS, George D., Major, St. Louis.
WOOD, George Oviatt, 1st Lieut., Rochester, Minn.
WOODRUFF, Marston True, Captain, Philadelphia.
WORSELY, Thomas L., 1st Lieut., Rocky Mount, N. C.

Orders Revoked

PRATT, Thomas Dennie, 1st Lieut., Brookline, Mass.

SECOND CORPS AREA

The following additional medical reserve corps officers have been ordered to active duty by the Commanding General, Second Corps Area, which comprises the states of New York, New Jersey and Delaware:

ALLEN, Herbert B., 1st Lieut., Harrison, N. Y., Fort Dix, N. J.
BARNES, Earle E., 1st Lieut., Lowville, N. Y., Pine Camp, N. Y.
BERNHARD, Joel A., 1st Lieut., East Orange, N. J., Fort Bragg, N. C.
CARRUTHERS, Roderick J., 1st Lieut., Syracuse, N. Y., Fort Ontario, N. Y.
CLARK, Clarence L., 1st Lieut., Ballston Spa, N. Y., Fort Dix, N. J.
DENZER, Frank L., 1st Lieut., Brooklyn, General Dispensary, New York.
GERSON, Stanley, 1st Lieut., West New Brighton, N. Y., Madison Barracks, N. Y.
HEALY, Edward G., 1st Lieut., Buffalo, General Dispensary, New York.
HORNE, Robert P., 1st Lieut., Skaneateles, N. Y., Carlisle Barracks, Pa.
LESSEY, Arthur G., 1st Lieut., Wilmington, Del., Fort Ontario, N. Y.
McCUNE, Wallace H., 1st Lieut., East Rutherford, N. J., Fort Jackson, S. C.
McLAUGHLIN, John T., 1st Lieut., Pleasantville, N. J., Pine Camp, N. Y.
PROVENZANO, Samuel, 1st Lieut., Newark, N. J., Camp Grant, Ill.
RESNICK, Nathan, 1st Lieut., Newark, N. J., Fort Bragg, N. C.
ROBIN, Morris J., 1st Lieut., Jackson Heights, N. Y., Camp Upton, N. Y.
ROSS, John R., 1st Lieut., Jersey City, N. J., Commanding General, Second Corps Area, Governors Island, N. Y.
SACO, Louis S., 1st Lieut., Paterson, N. J., Fort Bragg, N. C.
TARTIKOFF, George, 1st Lieut., Brooklyn, Fort Dix, N. J.
TICHENOR, Clifford J., 1st Lieut., Syracuse, N. Y., Camp Stewart, Ga.
TRIPPE, Morton F., 1st Lieut., Asbury Park, N. J., General Dispensary, New York.
WAHRMAN, Jules, 1st Lieut., New York, Fort Dix, N. J.
WULWICK, Michael, 1st Lieut., Brooklyn, Carlisle Barracks, Pa.

Orders Revoked

BAXT, Sydney J., 1st Lieut., Paterson, N. J.
BELLANTONI, Adolph J., 1st Lieut., New York.
BENSON, Murray, 1st Lieut., New York.
BLASH, Andrew A., 1st Lieut., Elmira, N. Y.
BROWN, Walter E., Jr., 1st Lieut., Schenectady, N. Y.
COSTA, Joseph A., 1st Lieut., Bedford Hills, N. Y.
CRUNDEN, Allan B., Jr., 1st Lieut., Montclair, N. J.
FRANCO, Biagio, 1st Lieut., New York.
FRIEDMAN, Eliot M., 1st Lieut., Utica, N. Y.
FRUCHTBAUM, Robert P., 1st Lieut., Nutley, N. J.
GERSH, Irving, 1st Lieut., New York.
GOLDSTEIN, Sol R., Captain, Rochester, N. Y.
GREELEY, Horace, Jr., Major, Brooklyn.
HARTSTEIN, Edward, 1st Lieut., 12th Infantry, Fort Dix, N. J.
JASPIN, George R., 1st Lieut., Rockville Centre, N. Y.
JONES, Courtland S., Jr., 1st Lieut., Fort Niagara, N. Y.
KNOPF, Albert A., 1st Lieut., New York.
LA RAJA, Raymond J., 1st Lieut., Brooklyn.
LYNCH, Edward T., 1st Lieut., Elizabeth, N. J.
MANDOUR, Brahim A., 1st Lieut., Utica, N. Y.
MAYER, Hyman R., 1st Lieut., Woodside, N. Y.
MOORE, Dean C., 1st Lieut., East Orange, N. J.
MORIARTA, Webster M., Captain, Saratoga Springs, N. Y.
PROVISOR, Benjamin, 1st Lieut., Passaic, N. J.
SARAJIAN, Aram M., 1st Lieut., West Englewood, N. J.
SAYET, Maxwell M., 1st Lieut., New York.
SCHAUS, James P., 1st Lieut., Fort Niagara, N. Y.
SETTEL, Edward, 1st Lieut., Brooklyn.
SHLESINGER, Julius H., 1st Lieut., College Point, N. Y.
STRINGER, Sydney W., Captain, Syracuse, N. Y.
THORNE, George D., 1st Lieut., New York.
TRAVIS, Richard E., 1st Lieut., Hornell, N. Y.
TYLAR, Norman E., Captain, Windsor, N. Y.

ORDERED TO FOREIGN DUTY

ECK, Raymond Livingston, 1st Lieut., Lewistown, Mont., Station Hospital, Dutch Harbor, Alaska.
FICKLIN, George Clifford, 1st Lieut., Sitka, Alaska, Sitka, Alaska.
GOAD, Lloyd Henry, 1st Lieut., El Paso, Texas, Army Medical Corps, Manila, P. I.
HARDAWAY, Robert Morris, III, 1st Lieut., Schofield Barracks, Hawaii, 8th Field Artillery, Schofield Barracks, Honolulu, Hawaii.
HUCHERSON, Denman Carter, 1st Lieut., Lufkin, Texas, Panama Canal Department, Quarry Heights, Balboa Heights, Canal Zone.
MERKEL, Emil Elvin, 1st Lieut., Corregidor, P. I., Station Hospital, Fort Mills, Corregidor, P. I.
SHARP, Mahlon Samuel, 1st Lieut., Schofield Barracks, Hawaii, 11th Medical Regiment, Schofield Barracks, Honolulu, Hawaii.
SMITH, Donald H., 1st Lieut., Fairview, Okla., Hospital, Fort Stotsenburg, Philippine Islands.
TOPIC, John Richard, 1st Lieut., Nevada City, Calif., Annette Island Landing Field, Metlakatla, Alaska.
TOUSIGNANT, Albert Noel, Captain, Oconto, Wis., Sternberg General Hospital, Manila, P. I.
WHITE, Raymond Leroy, 1st Lieut., Santa Maria, Calif., Fort Shafter, Honolulu, Hawaii.
WILSON, Charles Henry, Major, New York, Sternberg General Hospital, Manila, Philippine Islands.

ORGANIZATION SECTION

MEDICAL LEGISLATION

MEDICAL BILLS IN CONGRESS

Change in Status.—S. J. Res. 104, introduced by Senator Langer, North Dakota, on August 19, passed the Senate on August 21. The resolution proposes to create an Encephalitis Control Board, to consist of six members, one member to be the Surgeon General of the Public Health Service, who is to serve as chairman, one member to be an officer or employee of the Department of Agriculture, to be appointed by the Secretary of Agriculture, and one member from each of the states of Minnesota, Montana, North Dakota and South Dakota, to be appointed by the Surgeon General. The board is to be authorized, in cooperation with the United States Public Health Service and the health authorities of the states, to investigate and study the origin and causes of encephalitis. The board is to be granted the power to (1) put under quarantine such areas as it deems necessary to prevent the spread of encephalitis, (2) enter any hospital or other place to examine any patient who has or is suspected of having encephalitis, (3) order and conduct necropsies on the body of any person who has died or is suspected of having died of encephalitis, (4) conduct such other investigations and examinations as are deemed necessary to determine the origin and causes of encephalitis or to find a cure therefor. The board is to provide for the establishment of a laboratory in Bismarck, N. D., which is to be available for use by the health authorities of any state or the Dominion of Canada. The resolution proposes to authorize the annual appropriation of such sums as may be necessary to carry out its provisions and the immediate appropriation of $3,000,000 for such purposes.

Bill Introduced.—S. 1861, introduced by Senator Murdock, Utah, for himself and for Senator Gillette, Iowa, proposes to permit chiropractors to treat injured federal employees entitled to the benefits of the United States Employees' Compensation Act.

WOMAN'S AUXILIARY

Arkansas

Mrs. A. G. Lee, Mrs. J. F. Williams and Mrs. A. W. Roberts entertained the Bowie and Miller auxiliary at the home of Mrs. S. W. Alston. The Bowie and Miller auxiliary won second prize in the national Hygeia contest and at a dinner April 25 honored Mrs. William Hibbitts, president of the auxiliary to the Texas Medical Association, and Dr. Preston Hunt, president of the association. Mrs. J. T. Robison was general chairman of arrangement. The following officers were named for the ensuing year: Mrs. L. H. Lanier, president; Mrs. R. R. Kirkpatrick, president-elect; Mrs. Allen Collom Jr., first vice president; Mrs. R. H. T. Mann, second vice president; Mrs. T. F. Kittrell, third vice president; Mrs. P. H. Phillips (Ashdown), fourth vice president; Mrs. N. B. Daniel, recording secretary; Mrs. E. M. Watts, corresponding secretary; Mrs. A. G. Lee, treasurer; Mrs. S. A. Collom, historian; Mrs. Roy Baskett, publicity secretary, and Mrs. Harry Murry, parliamentarian. Winners of a public school essay contest on health were presented. The subject was "Health as a First Line of National Defense." Mrs. J. T. Robison discussed "Ethics for Doctors' Wives."

The Woman's Auxiliary to the Pulaski County Medical Society met recently at the home of Mrs. M. E. McCaskill. The president, Mrs. S. C. Fulmer, presided. Mrs. Paul Fulmer reported $79.20 profits from a book review and rummage sale for the Student Loan Fund. Mrs. W. A. Lamb, public relations chairman, reported on the cancer control movement. Mrs. H. A. Higgins reported sixty-nine garments made for the Arkansas Children's Home and Hospital.

Mrs. Charles T. Chamberlain was elected to head the auxiliary to the Sebastian County Medical Society for the ensuing year at a meeting, April 7, at the home of Mrs. W. R. Brooksher Jr. Other officers are: Mrs. Bert Ware, secretary, and Mrs. J. L. Kellum, treasurer. Mrs. I. Fulton Jones, captain for the auxiliary during the cancer control campaign, reported that auxiliary members contributed $103 to the membership fund.

Georgia

The auxiliary to the Richmond County Medical Society met at the home of Mrs. Lombard Kelley in Augusta, Mrs. Lucius Todd, presiding. The treasurer reported sending $50 to the county society to defray expenses for a guest speaker at one of their meetings, this to be known as the Auxiliary Lecture. Mrs. H. G. Banister, president of the Woman's Auxiliary to the Medical Association of Georgia, talked and Mrs. Richard Torpin gave a paper on Jane Todd Crawford. Dr. Loree Florence of Athens, first woman to graduate from the University of Georgia School of Medicine, talked on "Women in Medicine."

Mississippi

The Four-County Unit to the Thirteen Counties Auxiliary met March 4 at the home of Mrs. A. J. Stacy in Tupelo. Dr. W. H. Anderson reviewed the duties of doctors' wives. Mrs. W. L. Orr gave an article on the country doctor from *Hygeia*.

New York

A talk by Dr. Adele E. Streeseman, chairman of the advisory council, a lecture by Mrs. Lewis P. Addoms on "The Motion Picture Council" and a book review by Mrs. C. A. Peake gave the February assemblage of doctor's wives of Kings County an afternoon of entertainment. Mr. E. A. Griffin has donated a piece of needlepoint to be sold, the proceeds of which will be used for the Physicians' Home, Incorporated.

The Albany county auxiliary heard Dr. Haven Emerson of Columbia University speak on "Compulsory Health Insurance or Voluntary Sickness Insurance." This campaign is being sponsored by the auxiliary under the direction of its president, Mrs. A. L. Madden.

Oregon

The Multnomah county auxiliary raised $266 for the Student Loan Fund at a raffle at the home of Mrs. Charles H. Manlove.

Pennsylvania

About 25 members of the Warren County medical auxiliary met in Warren, May 26, at a luncheon in honor of Mrs. Maxwell Lick and Mrs. James Delaney, both of Erie, state president and district counselor, respectively. Mrs. Lick spoke on the relationship of the physician's wife to the community.

South Carolina

The Woman's Auxiliary to the Pickens County Medical Society held a recent meeting at the home of Mrs. W. B. Turman, Easley. Mrs. P. E. Swords, Liberty, presided. Mrs. E. F. Wyatt gave a talk on "Horse and Buggy Days" with incidents of the early practice of her husband.

Texas

The Henderson county auxiliary observed the annual "Doctor's Day" by honoring physicians of Henderson County with a banquet at the Henderson County Woman's Club, with Mrs. Robert Hodge, president of the auxiliary, as general chairman. Dr. W. W. Bauer, associate editor of *Hygeia*, after the dinner addressed a large audience at the Presbyterian Church.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

CALIFORNIA

Personal.—Ernest O. Lawrence, Ph.D., professor of physics and director of the radiation laboratory of the University of California, Berkeley, recently received the honorary degree of doctor of science from Harvard University. Dr. Lawrence is the inventor of the cyclotron and a Nobel Prize winner.

The Lane Lectures.—Dr. Cecil K. Drinker, professor of physiology, Harvard Medical School, dean and professor of physiology in the graduate school and dean of the school of public health of Harvard University, Boston, will deliver the twenty-eighth series of Lane Medical Lectures at Stanford University School of Medicine, San Francisco, on the general subject of the lymphatic system. He will give the lectures on October 6, 10, 13, 17 and 20.

New Health Officer of Los Angeles County.—Dr. Wilton L. Halverson, health officer of Pasadena, has been appointed in charge of the Los Angeles County Health Department, succeeding the late Dr. John Pomeroy. Dr. Halverson topped the list of seven applicants for the position with a grade of 92.28 in the civil service examination. Dr. Halverson in 1929 graduated at the College of Medical Evangelists, Loma Linda, where he is now professor of public health and preventive medicine.

University News.—Charles Edward A. Winslow, C.P.H., Anna M. R. Lauder professor of public health, Yale University School of Medicine, New Haven, has been appointed Rosenberg lecturer in the public social services at the University of California, Berkeley, for the fall semester for 1941. The lectureship was established two years ago by the Rosenberg Foundation of San Francisco for the purpose of bringing to the university for one semester at a time authorities on the public social services.

Examination for Director of County Tuberculosis Sanatorium.—An open competitive examination for medical director of Olive View Sanatorium, in the foothills of the San Fernando Valley near Los Angeles, has been announced by the Los Angeles County Civil Service Commission. Applications must be filed with the commission by October 15. The salary is $500 a month and the usual three year county residence requirement has been waived, permitting all qualified men who are United States citizens to participate in the examination. Applicants must be male between the ages of 35 and 55, graduates of an approved medical school and have had at least five years' experience, three or more of which must have been in a responsible administrative and executive capacity in a sanatorium or hospital. Address the Civil Service Commission, Room 102, County Hall of Records, Los Angeles, for additional information.

GEORGIA

Society News.—The Fulton County Medical Society was addressed in Atlanta, August 18, by Drs. Odom O. Fanning on "The Medical Profession: Past—Present—Future," and Emmett Durham Colvin, "A Comparison of Thyroid Extract and Iodine Therapy in Preventing Toxemia of Pregnancy." The society was addressed, August 4, by Drs. Henry Walker Jernigan and William R. Baker on "Local Use of Sulfonamides in Compound Fractures" and Charles E. Hall Jr., "Treatment of Anorectal Abscess." All are from Atlanta.

ILLINOIS

District Health Officers.—Dr. Walter J. Broad, who has been connected with the division of child hygiene, state department of public welfare, Springfield, has been named district health officer with headquarters in Carlinville, succeeding Dr. Robert H. Bell, Carlinville, resigned. Dr. John P. Crotty, East St. Louis, has been named district health officer with offices in Robinson. Dr. Paul G. Buss, Dwight, has been appointed district health officer with headquarters in Macomb, succeeding Dr. Simon J. Maydet, who has entered the University of Michigan for additional training in public health. Dr. Wilber J. M. Menke, Paris, has been appointed district health officer with offices in Highland, filling the vacancy that occurred when Dr. Claude Milton Eberhart resigned early this year.

Chicago

A Series of Symposiums at the University.—A series of symposiums will be held in September at the University of Chicago in celebration of the university's fiftieth anniversary. Sessions will be devoted to the following topics, among others: Life at High Altitudes and Aviation Medicine; Levels of Integration in Biological and Social Systems; Visual Mechanisms; Thoracic Diseases; Sex Hormones; Immunological Mechanisms. Special lectures will be delivered by:

Robert R. Williams, D.Sc., chemical director, Bell Telephone Laboratories of New York, The Social Implications of Vitamins.

Dr. Donald Dexter Van Slyke, Rockefeller Institute for Medical Research, New York, The Physiology of the Amino Acids.

Florence B. Seibert, Ph.D., associate professor of physiologic chemistry, Henry Phipps Institute, Philadelphia, Tuberculosis as the Chemist Sees It.

Isabel Maitland Stewart, professor of nursing education, Teachers College, Columbia University, Advancing Frontiers in Nursing Education.

Dr. Charles H. Best, professor and head of the department of physiology, University of Toronto Faculty of Medicine, The Significance of Choline as a Dietary Factor.

Dr. Ernest W. Goodpasture, professor of pathology, Vanderbilt University School of Medicine, Nashville, Virus Infection of the Mammalian Fetus.

Section N of the American Association for the Advancement of Science will offer a comprehensive symposium on aerobiology, arranged in cooperation with the committee on aerobiology of the National Research Council and presented under the joint auspices of the association and the university. On Monday afternoon, September 22, the Theobald Smith Award in Medical Sciences will be presented to Herald R. Cox, Sc.D., of the U. S. Public Health Service, Rocky Mountain Laboratory, Hamilton, Mont., at which time he will deliver an address entitled "Cultivation of Rickettsiae of the Rocky Mountain Spotted Fever, Typhus and Q Fever Groups in the Embryonic Tissues of Developing Chicks." Irving Langmuir, LL.D., Schenectady, N. Y., president of the American Association for the Advancement of Science, will make the presentation.

LOUISIANA

Changes in Health Officers.—Dr. Benjamin O. Morrison, formerly of Crowley, has been appointed temporary director of the Red River Parish health unit, filling the vacancy that occurred when Dr. Charles W. Reid, Coushatta, was named director of the units in Madison and Tensas parishes with headquarters at Tallulah.

New Director of Preventive Medicine.—Dr. George M. Leiby, Washington, D. C., formerly director of preventive work against venereal diseases in the District of Columbia and in North Carolina, has been appointed director of the division of preventive medicine in the Louisiana State Board of Health, newspapers reported August 2. The appointment was effective immediately. Dr. Leiby graduated at Vanderbilt University School of Medicine in 1931.

MARYLAND

Personal.—Dr. Huntington Williams, health commissioner of Baltimore, went to England in July to study disaster precaution and technics of medical care after bombings. Dr. Williams was one of a group representing the Office of Civilian Defense.

Hospital Appointment.—Dr. Willard L. Quennell, superintendent of the Highland Park General Hospital, Highland Park, Mich., has been appointed director of the Union Memorial Hospital, Baltimore. He succeeds Dr. Clyde D. Frost, who died July 5. Dr. Quennell has been head of the Highland Park hospital since 1919.

MASSACHUSETTS

Fellowship in Urology Available.—The Lahey Clinic, Boston, announces that a fellowship in urology is now available. Inquiries with a brief account of training should be addressed to Dr. Earl E. Ewert, 605 Commonwealth Avenue, Boston.

District Meeting.—The Worcester North District Medical Society was addressed at the Henry Heywood Memorial Hospital, Gardner, July 23. The speakers were Drs. Elliott P. Joslin and Theodore C. Pratt, Boston, on the medical and surgical aspects of diabetes, respectively.

Course on Industrial Hygiene.—Harvard School of Public Health, Boston, announces a short course in industrial hygiene to begin September 22 and close a few days before Christmas. The course will be open to properly qualified engineers as well as to physicians. Additional information may be obtained from Philip Drinker, Ch.E., professor of industrial hygiene, Harvard School of Public Health, 55 Shattuck Street, Boston.

MICHIGAN

Alumni Reunion.—The second triennial reunion for alumni of the University of Michigan Medical School and former staff members and house officers of the University Hospital will be held in Ann Arbor, October 2-4. Alumni speakers will include:

Dr. William L. Benedict, Rochester, Minn., Diagnosis and Treatment of Glaucoma.
Detlev W. Bronk, Ph.D., New York, Physiologic Frontiers in the Medical and Social Sciences.
Dr. Charles L. Brown, Philadelphia, Clinical Aspects of Osteoporosis.
Dr. George M. Curtis, Columbus, Ohio, Determination of the Circulating Thyroid Hormone.
Dr. Joseph R. Darnall, lieutenant colonel, medical corps, U. S. Army, Office of the Surgeon General, Washington, D. C., Concerning Army Medical Service.
Dr. Harold K. Faber, San Francisco, Portals of Entry in Poliomyelitis.
Dr. Tinsley R. Harrison, Winston-Salem, N. C., Spontaneous Hypoglycemia as a Factor in the Production of Cardiovascular Symptoms.
Dr. Lyle B. Kingery, Portland, Ore., Significance of Pruritus in General Medicine.
Dr. Perrin H. Long, Baltimore, Recent Aspects of Bacterial Chemotherapy.
Dr. Robert T. Monroe, Boston, Old Age.
Dr. Walter M. Simpson, Dayton, Ohio, New Developments in the Diagnosis and Treatment of Brucellosis.
Dr. Warren T. Vaughan, Richmond, Va., The Allergic Factor in Certain Dermatoses.

Included among the faculty members who will participate are Drs. John Alexander, Carl E. Badgley, Frederick A. Coller, Charles F. McKhann, Norman F. Miller, Louis H. Newburgh, Cyrus C. Sturgis, Carl V. Weller and Udo J. Wile; Howard B. Lewis, Ph.D., and Malcolm H. Soule, Sc.D.

MINNESOTA

Rockefeller Grants to University.— A grant of $52,000 from the Rockefeller Foundation for a cooperative program of research in biology and medicine to be conducted by the Mayo Foundation, Rochester, and the University of Minnesota, Minneapolis, has been accepted by the board of regents of the university. The gift will be used in the study of radioactive isotopes as tracers of fundamental biologic mechanisms. Under the direction of Dean John T. Tate, Ph.D., members of the staff of the university and the Mayo Foundation have conducted this research since 1937, when a grant of $36,000 was awarded by the Rockefeller Foundation. The university also accepted a grant of $17,000 from the Rockefeller Foundation to support research in the field of biophysics under the direction of Otto H. Schmitt, instructor in physics and biology at the University of Minnesota.

NEBRASKA

University News.—Dr. Charles W. M. Poynter, dean of the University of Nebraska College of Medicine, Omaha, and also professor and chairman of the department of anatomy, has been relieved of his duties as chairman. John S. Latta, Ph.D., professor of anatomy and secretary of the department, has been made chairman.

Personal.—Dr. William P. Wherry, Omaha, received the honorary degree of doctor of science from Wayne University, Detroit, June 12. Dr. Wherry is president of the Nebraska State Medical Association.——Dr. J. S. Butler, Superior, was guest of honor at a dinner given by the Nuckolls County Medical Society, Superior, June 4. Dr. Butler graduated from Western Reserve University School of Medicine in 1883 and has practiced in Superior since 1889.

NEW JERSEY

Gastroenterologists Open Fall Program.— The New Jersey Gastroenterological Society announces its fall public meeting, October 6, at the auditorium of the Academy of Medicine of Northern New Jersey, Camden. Dr. Isidor S. Ravdin, George Leib Harrison professor of surgery, University of Pennsylvania School of Medicine, Philadelphia, will discuss "Some Problems of the Liver and Bile Ducts and Their Management." Dr. Hyman I. Goldstein, Camden, is president of the society.

Chemist Wins National Award.—Karl A. Folkers, Ph.D., assistant director of research, Merck and Company, Rahway, since 1934, has won the $1,000 American Chemical Society Prize in Pure Chemistry for 1941 in recognition of his contributions in the field of organic chemistry, newspapers announced August 13. The presentation of the award will take place at the annual meeting of the American Chemical Society in Atlantic City, September 8-12. Dr. Folkers was born in Decatur, Ill., in 1906 and received his Ph.D. from the University of Wisconsin, Madison, in 1931.

NEW YORK

Strengthen Public Water Supplies.—At the request of Gov. Herbert H. Lehman, the New York State Conference of Mayors and Other Municipal Officials, with the assistance of the state department of health, has inaugurated a program to strengthen public water supplies to meet possible emergencies and national defense needs. A committee representing various sections of the state has been appointed to assist in directing the work and formulating plans for all activities toward its fulfilment. An advisory committee has also been named. According to *Health News*, in the interests of national defense and to provide the greatest assurance possible in each community that other sources of water supply will be instantly available in case of failure of the regular supply, effort will be made at once to have connections installed between the systems of adjoining municipalities and to have such connections and necessary equipment in readiness for immediate utilization of other approved industrial or auxiliary water sources in case of emergency.

New York City

The Academy's Graduate Fortnight.— The New York Academy of Medicine will present its annual Graduate Fortnight, October 13-24. This year's subject is "Cardiovascular Diseases Including Hypertension." Activities will consist of panel discussions on four mornings, hospital clinics in the afternoons and formal addresses in the evening. The panel discussions will be held at the following times:

Tuesday, October 14, Dr. Paul D. White, Boston, chairman: Heart Failure, Pathologic Physiology, Symptomatology and Treatment.
Friday, October 17, Dr. Robert L. Levy, New York, chairman: Diseases of the Coronary Arteries and Their Treatment.
Tuesday, October 21, Dr. Edgar V. Allen, Rochester, Minn., chairman: Peripheral Vascular Disease, Diagnosis and Treatment, including the Role of Tobacco and Alcohol.
Friday, October 24, Dr. Harry Goldblatt, Cleveland, chairman: Hypertension and the Present Status of Therapy.

The program of evening addresses will include:

Dr. Carl J. Wiggers, Cleveland, Basic Hemodynamic Principles Essential to Interpretation of Cardiovascular Disorders (the Ludwig Kast Lecture).
Dr. White, Heart Failure (the Wesley M. Carpenter Lecture).
Dr. Timothy Leary, Boston, Pathology of Arteriosclerosis, with Special Reference to Coronary Arteries.
Dr. George Morris Piersol, Philadelphia, Arteriosclerosis: Social Significance and Recent Advances in Treatment.
Dr. Isaac Starr, Philadelphia, Arrhythmias, Including Paroxysmal Tachycardia and Their Treatment.
Dr. Harold M. Marvin, New Haven, Conn., Value and Limitations of the Electrocardiogram in Medical Practice.
Dr. Edward D. Churchill, Boston, Surgery of the Heart and Large Vessels.
Dr. Donald W. Gordon Murray, Toronto, Heparin.
Dr. James C. White, Boston, Raynaud's Disease.
Dr. Newell C. Gilbert, Chicago, Influence of Extrinsic Factors on the Coronary Flow and the Clinical Course of Heart Disease.
Dr. Thomas Duckett Jones, Boston, Treatment of Heart Disease in Childhood.
Dr. Soma Weiss, Boston, Mechanism and Treatment of Pulmonary Edema.
Dr. Tinsley R. Harrison, Winston-Salem, N. C., Effects of Renal Extracts on Hypertension.

NORTH CAROLINA

Medical Library Moved.—The Buncombe County Medical Library has recently moved to larger and better quarters in the Arcade Building, Asheville. The library was organized in 1935 by a small group in the county medical society headed by Dr. Julian A. Moore, Asheville. For several years it was supported by voluntary contributions of money, books and journals. Early in 1941 it was taken over by the Buncombe County Medical Society, which voted to increase its dues so that all members could benefit from the library. At present it contains seven hundred monographs, two thousand five hundred bound volumes of journals and receives sixty-three journals on subscription and by donation.

OKLAHOMA

New Director of Laboratories.—Dr. Ferdinand R. Hassler Jr., Shawnee, who recently completed a course of study at Johns Hopkins School of Hygiene and Public Health, Baltimore, has been appointed director of laboratories for the Oklahoma State Department of Health, Oklahoma City. Dr. Hassler was formerly director of the city-county health department at Shawnee. He succeeds William D. Hayes, Dr.P.H., now in charge of public health education for the state department.

Advisory Committee to Welfare Department.—A committee has been appointed by the Oklahoma State Medical Association to act in an advisory capacity to the state department of public welfare, according to the state medical journal. Members are Drs. Alfred R. Sugg, Ada, Robert M. Shepard,

Tulsa, Frank Clinton Gallaher, Shawnee, and Frederick Redding Hood and Charles R. Rountree, both of Oklahoma City. Dr. Rountree has been named chairman. A conference was held with the officials of the welfare department during the first meeting of the committee July 20. The appointment of the committee was made on the recommendation of the council of the state society, following a request by the welfare department to the society for assistance, in the form of an advisory committee, to ascertain the physical disability of the parents of the children making applications for aid from the dependent children fund.

OREGON

Society News.—The Portland Academy of Medicine will be addressed in Portland, September 2-3, by Dr. Ralph M. Waters, Madison, Wis., on "The Service of Anesthesiology in the Modern Hospital Within Operating Room" and "Service of Anesthesiology in the Modern Hospital Outside Operating Room." The program will be coordinated with the annual meeting of the state medical society.

Dr. Dillehunt Honored.—The faculty of the University of Oregon Medical School, Portland, gave a dinner, July 10, honoring Dr. Richard B. Dillehunt, dean of the school, on his thirtieth anniversary as a member of the school. A portrait, the work of Sydney Bell, Portland artist, was unveiled during the dinner. Dr. Dillehunt was born in Decatur, Ill., and graduated at Rush Medical College in 1910. He began the practice of medicine in Portland in 1911 and from 1912 to 1917 was professor of anatomy and assistant dean of the University of Oregon Medical School. He has been dean since 1920. He served during the World War. He was president of the Pacific Coast Surgical Association, 1939-1940.

PENNSYLVANIA

District Meeting.—The Fifth Councilor District of the Medical Society of the State of Pennsylvania held its annual meeting at York, August 21. The speakers included Drs. Henry M. Thomas Jr., Baltimore, on "Hypertension"; Francis F. Borzell, Philadelphia, "Rehabilitation of the Rejectee," and Daniel L. Borden, Washington, D. C., "The American Medical Association on Trial." Dr. Lewis T. Buckman, Wilkes-Barre, president-elect of the state society, made an address entitled "Out of the Night." Fifty year testimonial certificates were presented to Drs. George Alvin Harter, Maytown, and Ferdinand Shoemaker, now of Kansas City, Mo.

Philadelphia

New Dean at Jefferson.—Dr. William Harvey Perkins, professor of preventive medicine, Tulane University of Louisiana School of Medicine, New Orleans, has been announced as the new dean for Jefferson Medical College, succeeding the late Dr. Henry K. Mohler. Dr. Perkins was born in Philadelphia in 1894 and graduated at Jefferson Medical College in 1917. He was a member of the American Presbyterian Mission in Siam from 1919 to 1923, a Rockefeller Foundation fellow from 1925 to 1926 and visiting professor of medicine, Chulalongkarana University, Bangkok, Siam, from 1926 to 1930, when he joined Tulane as instructor. He became professor of preventive medicine in 1932.

SOUTH CAROLINA

Annual Clinical Assembly.—The seventh annual Piedmont Post Graduate Clinical Assembly will be held at the Anderson County Hospital, Anderson, September 9-11, under the presidency of Dr. Joseph Decherd Guess, Greenville. Included among the speakers will be:

Dr. Robert B. Greenblatt, Augusta, Ga., Endocrinology in Menstrual Disturbances.
Dr. Franklin B. Peck, Indianapolis, Therapeutic Application of the Various Insulins.
Dr. Frederick Fitzherbert Boyce, New Orleans, The Hepatic (Hepatorenal) Factor in Burns.
Dr. Tinsley R. Harrison, Winston-Salem, N. C., Treatment of Cardiovascular Emergencies.
Dr. Arthur Grollman, Winston-Salem, Some Practical Aspects of Endocrinology.
Dr. Frank R. Wrenn, Anderson, Résumé of the State Aid Cancer Clinic at Anderson County Hospital.
Lieut. Col. Elias E. Cooley, medical corps, U. S. Army, Medicomilitary Problems of the Moment.
Dr. Frank P. Coleman, Columbia, Traumatic Injuries of the Chest.
Dr. Charles W. Roberts, Atlanta, Ga., Changing Concepts in Industrial Medicine.
Dr. John A. Kelly, New York, Carcinoma of the Uterus.
Dr. Kenneth M. Lynch, Charleston, Pathology for Uterine Carcinoma.

Dr. H. Sheridan Baketel, Jersey City, N. J., will address one dinner session on "The Future Economic Status of the Physician" and Dr. William deB. MacNider, Chapel Hill, N. C., the banquet, on "The Sick Individual as a Biological Problem."

TENNESSEE

Personal.—Dr. James A. Price, Oakville, has resigned as medical director of the Oakville Memorial Sanatorium. He has been in charge of the city and county institution since it was opened in 1921. His successor is Dr. Felix A. Hughes Jr., Nashville.——Dr. Julian E. Williams, Kingsport, has been appointed health officer of Sullivan County during the absence of Dr. J. W. Erwin, Blountville, in military service. ——Dr. William O. Baird, Henderson, has been appointed commissioner of state institutions by Governor Cooper, succeeding Mr. Andrew T. Taylor, resigned.

TEXAS

Child Guidance Clinic.—The establishment of a child guidance clinic in connection with the University of Texas School of Medicine and the John Sealy Hospital outclinic, Galveston, was discussed at a recent meeting of representatives of local agencies and psychiatrists, with Dr. Titus H. Harris, professor of neurology and psychiatry at the university school of medicine, presiding. Various phases of organization of the clinic were considered, including its functions and the need of the community.

Personal.—Dr. William C. Farmer, San Antonio, honorary life president of the Bexar County Tuberculosis Association, has been made an honorary member of the National Tuberculosis Association; he has been a member of the latter group since 1904 and a member of its board of directors for many years. He was formerly president of the Texas State Tuberculosis Association.——Dr. Edgar P. Shelton, Dripping Springs, was honored recently at a basket picnic at Camp Ben McCulloch, Driftwood, given by friends to observe his fiftieth anniversary in the practice of medicine. A purse of $100 was presented to Dr. and Mrs. Shelton. Speakers included Senator T. H. McGregor and Judge Harry L. Graves, justice of the court of criminal appeals, Austin, with both of whom Dr. Shelton served in the state legislature; Lon A. Smith, former state senator and member of the state railroad commission, and C. E. Evans, LL.D., president of the Southwest Texas State Teachers College, San Marcos.

VIRGINIA

Faculty Changes at the Medical College of Virginia.—Promotions in the faculty of the Medical College of Virginia, Richmond, include the following:

Dr. Webster P. Barnes, to be assistant professor of surgery.
Dr. Guy W. Horsley, assistant professor of surgery.
Dr. Lawther J. Whitehead, associate professor of radiology.
Thomas D. Rowe, M.S., associate professor of pharmacy.
Dr. Rudolph C. Thomason, assistant professor of ophthalmology.

State Program for Outpatient Care.—With the appointment of Dr. Joseph E. Barrett, Marion, as director of the program, the state hospital board has launched its long planned project of outpatient care throughout the state. As supervisor of the outpatient service, Dr. Barrett will continue the six clinics in operation in the southwestern part of the state and expand the program to other sections as physicians and social workers become available. Dr. Barrett was formerly director of the Michigan State Hospital Commission and since 1939 has been clinical director of Southwestern State Hospital, Marion.

WASHINGTON

Psychiatric Institute.—The fourth institute on postgraduate psychiatric education for state hospitals held under auspices of the American Psychiatric Association will be held at the Western State Hospital, Fort Steilacoom, September 1-13. Participating in the course, which includes lectures and clinics, are the following:

Dr. Thomas A. C. Rennie, Baltimore, associate in psychiatry, Phipps Clinic, Johns Hopkins University, Baltimore.
Dr. William Malamud, clinical director of psychiatry, Massachusetts State Hospital, Worcester.
Dr. Franklin G. Ebaugh, director of psychiatry, Colorado Psychopathic Hospital, Denver.
Dr. Lydia G. Giberson, psychiatrist, Metropolitan Life Insurance Company, New York.
Drs. Frederick Lemere and Edward D. Huedemaker, Seattle.
Dr. John E. Raaf, Portland, Ore.
Dr. Karl A. Menninger, Topeka, Kan.
Dr. Walter Freeman, secretary, American Board of Psychiatry and Neurology, Washington, D. C.
Miss Henrietta Adams, director of nursing education, University of Washington, Seattle.

WISCONSIN

Centennial Meeting of State Society.—The State Medical Society of Wisconsin will hold its one hundredth annual meeting at the Memorial Union Theater, Madison, September 10-12, under the presidency of Dr. Ralph P. Sproule, Milwaukee. The centennial dinner will be held Wednesday evening with Dr. Nathan B. Van Etten, New York, Past President of the American Medical Association, as the speaker. His subject will be "The Triumphs of Optimism." Included among the guest speakers will be:

Dr. Adrien H. Verbrugghen, Chicago, Head Injuries.
Dr. Fremont A. Chandler, Chicago, Fractures of the Spine.
Dr. Morris Fishbein, Editor of THE JOURNAL, Chicago, American Medicine and the People's Health.
Dr. Henry W. F. Woltman, Rochester, Minn., Late Neurologic Manifestations in Cases of Injury.
Dr. Thomas K. Brown, St. Louis, Treatment of Puerperal Infections.
Dr. Arthur H. Parmelee, Oak Park, Ill., Joint Responsibility of Obstetrics and Pediatrics in the Problems of the Newborn.
Dr. Theodore E. Walsh, St. Louis, Nasal Therapy in Common Colds.
Dr. Julius Lempert, New York, The Lempert Fenestration for the Restoration of Air Conduction Hearing on Otosclerosis.
Dr. Vincent C. Johnson, Ann Arbor, Examination of the Skull by X-Ray Methods.
Dr. Russell D. Herrold, Chicago, Chemotherapy in Urinary Infection.
Dr. Conrad Berens, New York, Chemotherapy in Ophthalmology.
Dr. Frank E. Burch, St. Paul, Some New Ocular Therapeutics.
Dr. Henry F. Helmholz, Rochester, Minn., Chemotherapy with the Sulfonamide Group.
Dr. James A. Evans, Boston, Cardiac Accidents and Their Management.
Dr. Nathan A. Womack, St. Louis, Pathogenesis of Tumors of the Lung.
Dr. Philip S. Hench, Rochester, Minn., Classification and Management of Rheumatoid Disease.
Lieut. Col. Albert N. Baggs, medical reserve, National Headquarters, Selective Service System, Washington, D. C., Selective Service and the Examining Physician.
Dr. John W. Towey, Powers, Mich., How Early Tuberculosis Can Be Detected in the Office.
Dr. Robert I. Harris, Toronto, Canada, War Time Amputations.

At a general session Friday afternoon the Theresa Limberg Rogers Memorial Lecture will be delivered by Dr. George Wilson, Philadelphia, on "Neuropsychiatry and Some of Its Medicolegal Complications."

WYOMING

Tularemia Infection.—The plague laboratory in San Francisco proved tularemia infection in a pool of 43 fleas taken from 24 prairie dogs (Cynomys leucurus leucurus) in Wyoming, according to *Public Health Reports*, July 25. The prairie dogs were killed, June 14, on a ranch south of Parco, Carbon County, and infection was demonstrated in the laboratory by the injection of the fleas in guinea pigs. This is the first instance at this laboratory in which tularemia has been produced in guinea pigs by the injection of infected fleas.

New Director of Student Health.—Dr. Ray H. Ballard, director of the Cleveland County Health Department, Norman, Okla., has been appointed director of student health at the University of Wyoming, Laramie, effective August 1. Dr. Ballard graduated at the University of Oklahoma School of Medicine, Oklahoma City, in 1939. He has served as athletic director and basketball coach at Phillips University, Enid, Okla., and as athletic director and coach of all sports at Northeastern State College, Tahlequah, Okla. He also served as athletic director and instructor in physical education at Northeastern.

GENERAL

Society News.—The Aero Medical Association of the United States has changed the date of its annual meeting from August 29-31 to October 31-November 2 in Boston.

International Medical Annual—1941.—Information just received indicates that the copy of the International Medical Annual received by THE JOURNAL and listed under "Books Received" in the issue for August 2 is one of a few copies of that publication issued in advance of its general distribution. Immediately after these few copies were mailed, the British publishing plant was bombed and all the sheets of this book, as well as much printing equipment, were destroyed. It has not been found practical to reprint the book. The International Medical Annual for 1941 is not, therefore, available and will not be available. The publishers hope that next year or sooner they may be able to present another volume.

New Officers of Ear, Nose and Throat Specialists—Medal Awarded.—Dr. James G. Dwyer, New York, was chosen president-elect of the American Laryngological, Rhinological and Otological Society at its June meeting in Los Angeles, and Dr. James A. Babbitt, Philadelphia, was installed as president. Other officers include Drs. Kenneth M. Day, Pittsburgh, treasurer, and Carlton Stewart Nash, Rochester, N. Y., secretary. The society's medal was awarded to Dr. James Sonnett Greene, New York, for "his unselfish devotion to the alleviation of speech defects." Dr. Greene graduated at Cornell University Medical College, New York, in 1902 and founded the National Hospital for Speech Disorders in New York in 1916. He has written extensively on the correction of speech defects.

Care Urged on Twin Birth Certificates.—Supplemental instructions have been issued by the U. S. Bureau of the Census to all transcribers of birth certificates, urging extra care in copying the records of twin births. In coding every twin, the bureau must know the sex of the twin's mate and whether the mate was born alive. When this information cannot be obtained after repeated attempts, the certificate must be coded as a single birth. If only one of the twins was born alive, transcribers should write on the birth certificate "Mate stillborn, sex. . . ." The division of vital statistics is considering asking states to send in their stillbirth transcripts monthly. These transcripts are usually sent in at the end of the year, when the division lacks adequate time to check them thoroughly or send out queries.

The Poliomyelitis and Encephalitis Situation.—The senate approved, August 21, a resolution which would in effect authorize an appropriation of three million dollars for investigations into the causes of sleeping sickness. A detailed account of this bill appears in the Organization Section of this issue, page 798. On August 20 the U. S. Public Health Service stated there were 121 new cases of encephalitis in Minnesota, 340 in North Dakota, 44 in South Dakota, and 32 in Colorado. The service also reported 549 new cases of infantile paralysis in the country. Through August 16 a total of 2,823 cases of the disease had been reported throughout this year. Newspapers announced that the service does not consider the number of cases alarming, because this is the season when they normally increase. In York, Pa., college students and all persons under 21 years of age were told on August 20 that they will not be permitted to leave the city without health department permits, based on consent to a four day quarantine at destination. This measure was taken as the infantile paralysis epidemic continued to spread in the York area. Fifty-six cases were reported with 5 deaths and 10 persons in serious condition, according to the New York *Times*. Three cases were reported in Burlington County, N. J.

CANADA

Encephalitis and Poliomyelitis Continue to Spread.—The highest day's total in the outbreak of encephalitis in Manitoba was reported for August 21 with 30 new cases and 3 deaths. Newspapers reported that the new cases, which broke out in the province in July, brought the total to 149, of which 39 are in Winnipeg, while the total deaths rose to 11. There were 23 new cases of poliomyelitis, bringing the total to 591, with 133 in Winnipeg.

Mickle Award to Dr. Collip.—Dr. James B. Collip, Gilman Cheney professor of biochemistry, McGill University Faculty of Medicine, Montreal, has received the Charles Mickle Fellowship of the University of Toronto. The fellowship is awarded annually to that member of the medical profession considered by the council of the Toronto faculty of medicine to have done most during the preceding ten years to advance sound knowledge of a practical kind in medical art or science.

CORRECTION

Encephalitis in the Yakima Valley.—In the article on "Encephalitis in the Yakima Valley, Mixed St. Louis and Western Equine Types," in THE JOURNAL, July 19, on page 163, second column, twenty-one lines from the top, this sentence occurs: "This finding is similar to that pointed out by Leake, Musson and Chope [9] and by Jones and Bozalis [10] relative to the St. Louis outbreak, and interpreted by them as incriminating certain Culex mosquitoes." The author, Dr. William M. Hammon, writes that these references are incorrect. The references intended were to Lumsden, L. L.: Observations of the Epidemiological Features of Epidemic Encephalitis Lethargica, Curricula in Public Health, Public Health 416a. University of California (from unpublished official report), and Casey, A. E., and Broun, G. O.: Epidemiology of St. Louis Encephalitis, *Science* **88**:450 (Nov. 11) 1938. Leake, Musson and Chope concluded that transmission was probably by contact, and the paper by Jones and Bozalis is concerning a clinical follow-up study. Dr. Lumsden pointed out the probable role which Culex mosquitoes played, and Casey and Broun pointed out the correlation with standing polluted water, a common breeding place for certain Culex mosquitoes.

Foreign Letters

LONDON

(From Our Regular Correspondent)

June 28, 1941.

Anglo-American Cooperation in Research

In the *Times* the physiologist A. V. Hill states that Dr. J. B. Conant, president of Harvard University and an eminent chemist, recently at President Roosevelt's request came here to inaugurate arrangements for collaboration between the National Defense Research Committee of the United States and corresponding British scientific organizations. These are now established, with a permanent office in the United States embassy in London and central scientific office attached to the British supply council in Washington; close liaison had previously been arranged with the National Research Council of Canada. The only urgent need is for more direct and rapid transport, either way, of men, papers and small experimental equipment. Professor Hill says that during this century the center of gravity of scientific discovery has steadily moved westward. American scientists have been singularly willing to learn the best that the rest of the world could show them and at the same time have developed a characteristic approach to science, making more use than we of the tools and resources of engineering and large scale industry.

During this century several influences have led to increased familiarity between the scientists of the two countries. First perhaps among these are the American Rhodes scholarships; then the fact that since the last war Americans have come here for their Ph.D.'s instead of going to Germany. The Rockefeller and other research fellowships have taken American graduates to Britain and British graduates to America. Friendly relations have also been established between learned bodies in the two countries. After 1933 both here and in America and regardless of political complexion, scholars and scientists were among the first to realize the nature of the Nazi menace. The earliest attack in Germany was directed against freedom of thought and the independence of science and learning. Scientists had personal knowledge of those who were persecuted.

The National Defense Research Committee was set up by President Roosevelt to correlate and support scientific research on mechanisms and devices of warfare. Medical problems were dealt with by the medical division of the National Research Council under the chairmanship of Dr. D. V. Bush and is in touch with the British Medical Research Council. Dr. J. E. Gordon, professor of preventive medicine at Harvard, is liaison officer with the ministry for a number of American medical organizations. Dr. W. A. Sawyer, head of the International Health Division of the Rockefeller Foundation, has paid us two visits. Dr. Paul Hudson, of the division, has been studying influenza here and Dr. Hugh Smith has just replaced him for the study of nutrition and epidemics. The National Defense Research Committee is providing this year for twenty-five British medical students to undergo their clinical training in American medical schools.

Professor Hill thinks that the present cooperation between Britain and America should carry over into times of peace. There were many American research workers in our laboratories before 1939 and not a few of ours in theirs. Mutual recognition of medical qualifications would facilitate medical education and progress on both sides. The problems of reconstruction are bound to be largely scientific. In these the present companionship must be maintained, for it rests not on any particular emergency but on a community of outlook, background and feeling and a common attachment to the same idea of life.

Medicinal Glycerin and the War

The war has had a considerable effect on the supply and prices of drugs. Some drugs have soared to four or five times their prewar levels, but the price of medical glycerin has remained remarkably constant. Yet during the last war the contrary was the case: glycerin prices went to great heights for the reason that it was then a much more important factor in the manufacture of explosives than it is today, when other chemicals have largely superseded it. However, economy in the use of glycerin is enjoined in order to avoid the use of cargo space and foreign currency in its importation. With this object the use of glycerin is being discouraged where it is not essential, as in the production of tooth pastes, toilet preparations and cosmetics. When glycerin is demanded for the making of medicines, any orders which appear to be excessive are considerably reduced, as suitable substitutes are available for such preparations as cough mixtures, gargles and throat pastilles.

Protection of Food from Poison Gas

Instructions for the protection of food from contamination by poison gas have been issued by the Ministry of Food. They recommend that whenever possible foodstuffs should be kept under cover and not stacked in the open. They should be given protection during handling at every point where they are normally exposed to the air, particularly those which are not in sealed containers. Tarpaulin sheets of the oil dressed type offer the best temporary protection for stocks in the open, but if they are not available screens should be improved with canvas, sacking or corrugated iron. In warehouses and other stores food which is not in sealed containers should, if possible, be stored on middle floors and away from windows, and additional cover should be given by protective sheets. Meat in cold storage is considered safe from contamination.

If food is affected by poison gas, or if there is a suspicion that it might have been, it should be examined by an authorized officer of the local authority, who will decide whether it can be decontaminated on the spot or whether it is necessary to remove it for treatment elsewhere.

The Work of Nurses in War Time

Never before in this country has the work of nurses been so important as since the outbreak of the present war. Not only are nurses in great demand for the fighting forces, but there has been spectacular advance in their work as the result of the rapid development of nursing in industry in consequence of the speeding up of the war machine. The Royal College of Nursing is the largest voluntary association of nurses and has more than thirty thousand members and a student nurses' association of nearly eight thousand members. The college specially trains nurses for work in air raid shelters and rest centers. It administers a fund of $50,000, which has been subscribed all over the world for the relief of bombed civilian nurses, and organizes hospitality in the country for nurses needing a respite.

Slaughter on the Roads

War conditions have increased fatal automobile casualties. During May 701 people were killed—an increase of 252 over the same month last year. The figure for April was 726, so that deaths are now occurring at an annual rate of nearly 9,000. Casualties have been consistently higher since the war began. The usual explanation is that the blackout increases the danger of the roads. But during May it was not dark during normal traffic hours, and in fact only one fifth of those killed perished during the hours of darkness. Another explanation is the rashness and inexperience of military drivers. But an analysis of the returns showed that in only a small proportion of the accidents were military drivers concerned. A heavy proportion of accidents occur in children under 15 and it has been suggested that war conditions have rendered supervision of these pedestrians more difficult.

Enemy Periodicals

Through the Royal Society the Rockefeller Foundation has provided funds for a thorough survey by the Association of Special Libraries and Information Bureaus of the present position as regards enemy and enemy controlled periodicals which reflect contemporary progress in the arts and sciences. The primary object is to obtain an inventory of needs and ascertain what supplies are available through existing channels. This enterprise is an example of Anglo-American cooperation.

AUSTRALIA

(From Our Regular Correspondent)

May 1, 1941.

Old Age Pensions

For the twelve months ended June 30, 1940 the cost to the commonwealth of old age pensions was £13,615,732; the liability with regard to invalid pensions was £2,965,326, giving a grand total of £16,581,058 for old age and invalid pensions in a young country whose population is just over eight million. [The present rate of exchange of the Australian pound is $3.23.]

During the year the number of old age pensions granted was 26,875; over 67,000 claims were rejected. On June 30, 1940 the number of old age pensions current for the whole of the commonwealth was 272,896. The total number of invalid pensions was 58,696. Of these 10,636 were granted during the year. Over 85,000 invalid pension claims were rejected. The number of old age pensioners per 10,000 of the estimated population as of June 30, 1940 was 388 and the number of invalid pensioners 84. The average fortnightly pension has risen from 19 shillings and 1 penny in 1910 (when the first payments were made) to 38 shillings and sixpence in 1940. The cost of administration of the pensions scheme was approximately £130,000 for the year.

Rheumatic Infection in Australia

In 1937 the Central Board of Health of South Australia, with the assistance of a grant from the National Health and Medical Research Council of Australia, set up an inquiry into the incidence and epidemiologic aspects of "juvenile rheumatism," the term including acute and subacute rheumatic fever, rheumatic carditis and Sydenham's chorea whether occurring in children or in adults. The recent report of the investigation shows that the ages of highest incidence of first attacks were between 5 and 12, although right up to the age of 16 the incidence of initial attacks was high. There was a negligible difference in the sex ratio. It was found that no less than 40 per cent of the younger children were discharged from the hospital with a murmur significant of valvular disease. Over the age of 12 the figure fell to 25 per cent. Cardiac damage was found to have followed acute rheumatism much more often than it did chorea and was found to be especially common in patients manifesting both conditions. Apparently the occurrence of the two manifestations of the disease in the one patient represents a more virulent or generalized infection, so that there is a greater liability to cardiac damage. In 34 per cent of patients with acute rheumatism there was some preceding upper respiratory infection, generally acute tonsillitis. It is significant that every patient who exhibited rheumatic nodules was judged to have been discharged from the hospital with cardiac damage.

An investigation of the epidemiologic problem shows that the predisposing causes are essentially the same here as elsewhere: poverty, damp living conditions and overcrowding play strong parts. Whether these conditions have a direct or only an indirect effect is of course not yet decided. But rheumatic infection is serious. Australia is fortunate in being less severely attacked than most countries; yet even here rheumatic infection and the associated heart disease take a dreadful toll. To cure the damaged hearts is not possible; to prevent the damage from rheumatic infection is a public health problem worthy of the best efforts.

BRAZIL

(From Our Regular Correspondent)

May 31, 1941.

Brazilian Congress of Tuberculosis

The second Brazilian Congress of Tuberculosis met at Rio de Janeiro and São Paulo in May. There were delegates from many cities of Brazil and also from Uruguay and Argentina.

Professor Sayago of Buenos Aires said that BCG vaccination is widely employed in the principal centers of Brazil, with satisfactory results.

Concerning the discovery of incipient tuberculosis when adequate treatment will return the patient to normal, many have emphasized the importance of the method called roentgen photography, which was proposed by Manoel de Abreu several years ago and is today a well known means of examination of large groups of workers, soldiers and others. This method was adopted by public health authorities in Argentina and Brazil. In a paper, Cabello Campos of São Paulo presented the results obtained at the Clemente Ferreira Institute, where about seventy thousand persons were thus examined. He said that 80 per cent of the patients whose disease is discovered by this method can recover, while only 20 per cent of those who spontaneously come to a tuberculosis clinic show any hope of improvement.

The federal government is building several hospitals, with the cooperation of private and departmental organizations. Since 1938, in São Paulo alone, two thousand, two hundred and thirty-two new beds for tuberculous patients have been constructed.

Coffee in Cases of Shock

The use of coffee by rectum in cases of shock is under experiment in many clinics. An infusion is made with 3 or 4 spoons of coffee powder in 200 cc. of warm water; when tepid, it is given by clyster to be retained by the patient. A second coffee enema can be given two hours later and repeated if necessary. Experiments with this method were done in the Butantan Institute at São Paulo. It was shown that not only caffeine but also other alkaloids are responsible for the good effects on restoration of blood pressure. Following these experiments the coffee enema is being given routinely in the Hospital de Pronto Socorro at Recife in the treatment of patients suffering from shock. The director of the institution, Prof. João Alfredo, declared his confidence in the method. The coffee enema is similarly employed in Uruguay. Prof. Carlos Stajano of Montevideo read a paper advocating the use of coffee enemas in cases of shock.

Marriages

TILDEN HENDRICKS PHIPPS JR., Hollis, Okla., to Miss Anna Dorothea Rights of Tampa, Fla., August 9.

CLAUDE ERNEST SIMONS, Wilson, N. C., to Miss Margaret Smith Moye of Goldsboro, August 5.

JUSTIN W. NEIGHBOR, Mason City, Wash., to Miss Winifred Wetherill of San Francisco, June 14.

CONRAD RAMSEY LAM, Detroit, to Miss Marian Melbourn Smith of Amenia, N. D., August 2.

JOHN A. P. MILLET to Mrs. Carmen de Gonzalo Manice, both of New York, August 7.

ROBERT COHEN, Louisville, Ky., to Miss Helen Sylvia Berk of Lafayette, Ind., August 10.

ALEXANDER R. MACKAY to Miss Marjorie Andres, both of Spokane, Wash., July 16.

WENDELL E. COVALT, Indianapolis, to Miss Ruth Pearson of Winamac, Ind., June 21.

Deaths

Lee Cone Van Wagner ✠ New Berlin, N. Y.; University of the City of New York Medical Department, 1891; past president of the Chenango County Medical Society; for many years local health officer; associate staff member of Faxton Hospital, Utica, and Chenango Memorial Hospital, Norwich; on the associate staff and member of the board of trustees of the Chase Memorial Hospital; aged 71; died, June 18, in the Mary Imogene Bassett Hospital, Cooperstown, of cerebral thrombosis.

William Thomas Burton Mitchell, Montreal, Que., Canada; University of Toronto Faculty of Medicine, 1917; associate professor of psychiatry and assistant professor of public health and preventive medicine at the McGill University Faculty of Medicine; member of the American Psychiatric Association and the American Orthopsychiatric Association; medical director of the Mental Hygiene Institute; on the staff of the Royal Victoria Hospital; aged 51; died, July 8.

Homer Carlton Seaver, Pomona, Calif.; University of California Medical School, San Francisco, 1915; formerly associate clinical professor of gynecology at the University of Southern California School of Medicine, Los Angeles; fellow of the American College of Surgeons; served during the World War; formerly on the staffs of the Good Samaritan, St. Vincent's, Cedars of Lebanon and the Los Angeles County hospitals, Los Angeles; aged 51; died, June 23.

Schuyler Colfax Graves, Pasadena, Calif.; University of Michigan Department of Medicine and Surgery, Ann Arbor, 1881; member of the House of Delegates of the American Medical Association in 1909; veteran of the Spanish-American War; in 1906 was president of the Kent County Medical Society; aged 83; died, July 14, in the Veterans Administration Facility, West Los Angeles, of cerebral hemorrhage.

John Matthew Tracy, Springfield, Mass.; Columbian University Medical Department, Washington, D. C., 1898; member of the Massachusetts Medical Society; served during the World War; lieutenant colonel in the reserve corps of the United States Army; formerly member of the school committee and city board of health; aged 72; on the staff of the Mercy Hospital, where he died, July 8.

Abner Rutherford Renninger ✠ Philadelphia; Medico-Chirurgical College of Philadelphia, 1899; on the staffs of the Eastern State Penitentiary Hospital, Joseph Price Memorial Hospital, Children's Hospital and the Coatesville (Pa.) Hospital; aged 65; died, July 28, in the Burlington County Hospital, Mount Holly, N. J., of injuries received in an automobile accident.

Robert A. Hanna ✠ Peoria, Ill.; Keokuk (Iowa) Medical College, 1894; member of the Western Surgical Association; fellow of the American College of Surgeons; for many years on the staff of the Proctor Hospital; honorary member of St. Francis and Methodist hospitals; aged 72; died, July 15, of coronary heart disease and arteriosclerosis.

Hermon Harvey Sanderson, Detroit; University of Toronto Faculty of Medicine, 1893; member of the American Academy of Ophthalmology and Otolaryngology; fellow of the American College of Surgeons; served during the World War; consulting surgeon, department of ophthalmology, Harper Hospital; aged 71; died, July 1.

Edward Everett Campbell ✠ Columbus, Ohio; Starling Medical College, Columbus, 1907; fellow of the American College of Physicians; on the staffs of the Grant and Mount Carmel hospitals; aged 57; died in July in the St. Francis Hospital of injuries received in an automobile accident following a cerebral hemorrhage.

Cleveland Reuben Duncan ✠ Yakima, Wash.; State University of Iowa College of Medicine, Iowa City, 1909; fellow of the American College of Surgeons; served during the World War; member of the draft board; aged 56; on the staff of St. Elizabeth's Hospital, where he died, July 17, of coronary thrombosis.

Ralph Edward Clogher, Utica, N. Y.; University of Pennsylvania School of Medicine, Philadelphia, 1909; member of the Medical Society of the State of New York; aged 56; on the staff of the Utica State Hospital, where he died, July 10, of embolism following a gallbladder operation.

John Henry Carman, Plainfield, N. J.; College of Physicians and Surgeons, Baltimore, 1881; member of the Medical Society of New Jersey; for many years on the staff of the Muhlenberg Hospital; aged 83; died, July 4, in Rockland, Maine, of arteriosclerosis and heart disease.

Richard Levy, Jackson Heights, N. Y.; Hamburgische Universität Medizinische Fakultät, Hamburg, Germany, 1930; member of the Medical Society of the State of New York; on the staff of the Mount Sinai Hospital, New York; aged 34; died, May 20, of an overdose of a sedative.

Eugene William Rufus Williams, Celeste, Texas; Arkansas Industrial University Medical Department, Little Rock, 1899; served during the World War; past president of the Hunt County Medical Society; aged 74; died, July 7, in Dallas of carcinoma of the liver.

John F. Haines, Monroeton, Pa.; College of Physicians and Surgeons, Baltimore, 1888; member of the Medical Society of the State of Pennsylvania; aged 77; died, July 14, in the Robert Packer Hospital, Sayre, of cerebral hemorrhage, hypertension and arteriosclerosis.

Roy Carl Rehder ✠ Mansfield, Ohio; University of Nebraska College of Medicine, Omaha, 1933; city and county health officer; president elect of the Ohio Federation of Public Health Officials; aged 38; died, June 23, of injuries received in an automobile accident.

Carl Edwin Conn ✠ Los Angeles; State University of Iowa College of Medicine, Iowa City, 1895; fellow of the American College of Surgeons; on the staff of the Presbyterian Hospital-Olmstead Memorial; aged 66; died, July 6, of coronary thrombosis and arteriosclerosis.

Henry Samuel Kieser ✠ Reading, Pa.; Hahnemann Medical College and Hospital of Philadelphia, 1930; school physician; on the staff of the Homeopathic Hospital; aged 37; died, July 11, in the Shore Memorial Hospital, Somers Point, N. J., of cerebral hemorrhage.

Hannah Mayer Stone ✠ New York; New York Homeopathic Medical College and Flower Hospital, New York, 1920; medical director of the Birth Control Clinical Research Bureau for many years; co-author of "Marriage Manual"; aged 46; died, July 10.

William Le Furgey Case, New York; Cleveland Homeopathic Medical College, 1905; associate professor of ophthalmology at the New York Medical College; on the staff of the Flower and Fifth Avenue hospitals; aged 71; died, July 3, of heart disease.

Jacob Moore Frazier ✠ Belton, Texas; University of Pennsylvania School of Medicine, Philadelphia, 1879; an Affiliate Fellow of the American Medical Association; formerly college physician and professor of biology at Baylor College; aged 84; died, July 8.

William Grimes Telfair, Orange, N. J.; University of Maryland School of Medicine, Baltimore, 1882; member of the Medical Society of the State of New York; aged 83; died, July 14, of carcinoma of the sigmoid and chronic endocarditis.

John W. Duncan, Jourdanton, Texas; Memphis (Tenn.) Hospital Medical College, 1894; member of the State Medical Association of Texas; past president of the Atascosa County Medical Society; aged 67; died, May 11, of cerebral hemorrhage.

Daniel Jerome Boland, Worcester, Mass.; Baltimore Medical College, 1904; served during the World War; for many years on the staff of the Veterans Administration; aged 62; died, May 27, in St. Vincent Hospital of pulmonary infarct.

Edwin Franklin Sheppard ✠ Jenkins, Ky.; University of Tennessee College of Medicine, Memphis, 1921; fellow of the American College of Surgeons; physician in charge of the Jenkins Hospital; aged 48; died, July 16, in Elkins, W. Va.

Michael Henry Chrystal ✠ Leominster, Mass.; Baltimore Medical College, 1901; for many years on the staff of the Leominster Hospital; formerly member of the school committee; aged 72; died, July 13, of cerebral hemorrhage.

Wheeler Davis, Kennett, Mo.; Beaumont Hospital Medical College, St. Louis, 1894; member of the Missouri State Medical Association; for many years health officer; aged 72; died, July 24, in the Methodist Hospital, Memphis, Tenn.

Harold Virgil Andrews ✠ Boston; Harvard Medical School, Boston, 1896; member of the New England Obstetrical and Gynecological Society; fellow of the American College of Surgeons; aged 68; died, June 9.

Frank Rolla Doll ✠ Whiting, Ind.; Rush Medical College, Chicago, 1919; fellow of the American College of Surgeons; formerly member of the board of health of Hammond; aged 50; died, July 23, of heart disease.

Cloyd Ray Byrd, Detroit; University of Michigan Medical School, Ann Arbor, 1929; formerly secretary of the medical staff of the Edyth K. Thomas Memorial Hospital; aged 41; was shot and killed, June 28.

Frank Raymond Dew ✠ Oberlin, Ohio; Ohio Medical University, Columbus, 1904; served during the World War; county health officer; at one time health officer of Belmont County; aged 63; died, July 20.

Charles Seymour Lehner, Cleveland; Ohio State University College of Medicine, Columbus, 1916; served during the World War; aged 50; died, July 3, in the Veterans Administration Facility, Dayton, of pneumonia.

George H. Ross ✠ Durham, N. C.; University of Tennessee Medical Department, Nashville, 1899; aged 77; died, July 4, in the Watts Hospital of bronchopneumonia and hypertensive cardiovascular disease.

Allis F. Hascall, New York; Woman's Medical College of the New York Infirmary for Women and Children, New York, 1879; aged 85; died, June 29, in the Post Graduate Hospital of cerebral thrombosis.

John Aloysius Gilson Jr. ✠ Haddon Heights, N. J.; St. Louis University School of Medicine, 1934; aged 34; pathologist on the staff of the Doctors Hospital, Philadelphia, where he died, July 14, of uremia.

Frank Jacob Fox, Tujunga, Calif.; Temple University School of Medicine, Philadelphia, 1922; aged 46; died, June 28, in the Veterans Administration Facility, San Fernando, of pulmonary tuberculosis.

Harold Edward Kellogg ✠ Brookings, S. D.; Lincoln Medical College of Cotner University, Lincoln, Neb., 1910; on the staff of the Brookings Municipal Hospital; aged 58; died in May of pneumonia.

Clyde De Witt Frost, Baltimore; Western Reserve University School of Medicine, Cleveland, 1920; aged 49; medical director of the Union Memorial Hospital, where he died, July 5, of sarcoma of the hip.

Wilson G. Dailey ✠ Millersburg, Ky.; University of Louisville (Ky.) Medical Department, 1888; past president of the Bourbon County Medical Society; aged 81; died, July 3, of lymphatic leukemia.

Arthur McWhitney Adams, Philadelphia; Temple University School of Medicine, Philadelphia, 1911; aged 59; died, May 26, in the United States Naval Hospital of cerebral hemorrhage.

Samuel Edward Courtney, Boston (licensed in Massachusetts in 1895); formerly member of the school committee; aged 75; died, June 1, in the City Hospital of carcinoma of the stomach.

John Newell Cunningham, Birmingham, Ala.; Vanderbilt University School of Medicine, Nashville, Tenn., 1924; member of the Medical Association of the State of Alabama; aged 43; died in July.

Kenneth Grant Mahabir, Halifax, N. S., Canada; Dalhousie University Faculty of Medicine, Halifax, 1916; served during the World War; aged 41; died, May 28, in the Halifax Infirmary.

Wiley Sharp Cranford Jr., Ellisville, Miss.; (licensed in Mississippi in 1907); member of the school board; formerly county health officer; aged 58; died, June 22, of chronic osteomyelitis.

Thomas Walter Gillespie, Victoria, Ill.; Rush Medical College, Chicago, 1896; member of the House of Delegates of the American Medical Association in 1925; aged 71; died, July 5.

Robert E. Gray, Garden City, Kan.; Rush Medical College, Chicago, 1896; member of the Kansas Medical Society; aged 79; died, June 17, of injuries received in an automobile accident.

Bernard Cohen ✠ Buffalo; University of Buffalo School of Medicine, 1887; veteran of the Spanish-American War; aged 74; died, July 15, of arteriosclerosis and coronary thrombosis.

William Michael Price ✠ Dabney, Ky.; Eclectic Medical Institute, Cincinnati, 1895; aged 74; died, July 11, in the Good Samaritan Hospital, Lexington, of acute pancreatitis.

George Perry Eldridge, Hartford, Conn.; Hahnemann Medical College and Hospital of Philadelphia, 1903; aged 60; died, July 13, in Norwich of carcinoma of the lung.

Francesco Saverio Greco, Somerville, Mass.; Regia Università di Napoli Facoltà di Medicina e Chirurgia, Italy, 1902; aged 62; died, June 15, of coronary thrombosis.

John Griffin Williamson, Rhine, Ga.; University of Georgia Medical Department, Augusta, 1890; member of the Medical Association of Georgia; aged 76; died, June 14.

Imlay Benet, Maplewood, N. J.; Long Island College Hospital, Brooklyn, 1895; aged 73; died, June 26, in the Orange Memorial Hospital of acute myeloid leukemia.

Paul Adie Ford, Talcott, W. Va.; Medical College of Virginia, Richmond, 1916; aged 50; died, June 28, in the Hinton (W. Va.) Hospital of perforated gastric ulcer.

John Vincent Thuot, New Bedford, Mass.; Laval University Faculty of Medicine, Quebec, Que., Canada, 1890; aged 75; died, June 16, of cerebral hemorrhage.

Marcellus George Gorin ✠ St. Louis; Missouri Medical College, St. Louis, 1895; aged 70; died, June 27, in the Missouri Baptist Hospital of arteriosclerosis.

Robert Miller, Philadelphia; Medico-Chirurgical College of Philadelphia, 1902; member of the Medical Society of the State of Pennsylvania; aged 67; died, May 20.

Alex Doniphan Louthan, Wylliesburg, Va.; Medical College of Virginia, Richmond, 1904; aged 71; died, July 4, in the Virginia Baptist Hospital, Lynchburg.

William Blaine Clark, Tulsa, Okla.; Chicago Medical College, 1887; aged 85; died, July 8, of nephritis, hypertension, heart disease and arteriosclerosis.

Max Benjamin Brandenberger ✠ Seguin, Texas; University of Texas School of Medicine, Galveston, 1906; aged 59; died, June 27, of heart disease.

Oscar Watson, Brooklyn; Columbia University College of Physicians and Surgeons, New York, 1899; aged 73; died, July 10, in St. John, N. B., Canada.

Joseph F. Dolamore, Galena, Ill.; Rush Medical College, Chicago, 1893; for many years president of the board of education; aged 70; died, July 27.

George Eber Hatfield, Tustin, Calif.; Rush Medical College, Chicago, 1892; aged 73; died, July 9, of injuries received in an automobile accident.

Herman Reynolds, McMinnville, Tenn.; University of Nashville Medical Department, 1909; aged 63; died, July 7, of coronary thrombosis.

William C. Schmitz, Manitowoc, Wis.; Rush Medical College, Chicago, 1886; aged 79; died, July 10, of chronic myocarditis and nephritis.

Walter Estus Deuel Jr., Penns Grove, N. J.; New York Medical College and Flower Hospital, New York, 1908; aged 62; died, July 18.

Emile Connie Underburg, Alpine, Calif.; College of Physicians and Surgeons, Keokuk, Iowa, 1890; aged 77; died, June 2, of heart disease.

Jesse M. Solomon, Newbury, Vt.; (licensed in Vermont); aged 63; died, July 18, of cerebral hemorrhage and arteriosclerosis.

Elliot Arnold Reed, Artesia, Calif.; Baltimore University School of Medicine, 1897; aged 75; died, July 4, of heart disease.

Walter Ives Budington ✠ Newark, N. J.; University of Vermont College of Medicine, Burlington, 1908; aged 56; died, July 4.

David R. Carden, Huntington, W. Va.; Kentucky School of Medicine, Louisville, 1898; aged 72; died, July 6, of pneumonia.

Robert B. Scott, Louisville, Ky.; Meharry Medical College, Nashville, Tenn., 1902; aged 70; died, July 2, of arteriosclerosis.

Isabel A. Church, Yorktown Heights, N. Y.; University of Buffalo School of Medicine, 1893; aged 80; died, June 17.

Robert George Jackson, Toronto, Ont., Canada; Jefferson Medical College of Philadelphia, 1905; aged 83; died, July 12.

Emily Graham Harrison, Los Gatos, Calif.; Cooper Medical College, San Francisco, 1895; aged 76; died, June 22.

Walter H. Graves, Wichita, Kan.; Chicago Medical College, 1883; aged 88; died, June 14, of arteriosclerosis.

Thomas Francis Conroy Sr., Palo Alto, Calif.; Rush Medical College, Chicago, 1896; aged 76; died, July 6.

Fred Marcy Richmond, Hartland, Vt.; (licensed in Massachusetts in 1904); aged 63; died, July 8, in Windsor.

Annie B. Wightman, Napa, Calif.; Hahnemann Medical College, San Francisco, 1885; aged 80; died, July 8.

William Warner Hibbard, Pomona, Calif.; Harvard Medical School, Boston, 1869; aged 91; died, June 25.

Luther Benjamin Cook, Coolidge, Ga.; Hospital Medical College, Atlanta, 1910; aged 61; died, June 24.

Samuel H. Sibert ✠ Wapakoneta, Ohio (licensed in Ohio in 1896); aged 83; died, June 14, of myocarditis.

John W. Wirt, Johnstown, Pa.; Columbus Medical College, 1892; aged 80; died, July 15.

Bureau of Investigation

COSMIC RAYS AND A CALIFORNIA WIZARD

Treatment from the Higher Powers by Radio When Patient Is Tuned in with a Cosmic Generator

In June 1939 a physician in Aurora, Ill., forwarded to the American Medical Association some of the advertising used by W. H. Neher. The Bureau of Investigation at once addressed the Board of Medical Examiners of California, referring the advertising to their attention and stating that the novel idea of collecting a fee for treatment by radio and having the patient continue to pay for it as long as he wants it presupposes a gullibility that it may be hoped does not exist to any extent. The advertising had actually stated the following: "It is not necessary that any one should come to this office or have any acquaintance with its management. Do not send money to have your friends tuned in if you do not have their consent. We must have their full name and address, and to make the identification certain, give the name of the mother and enclose the tuning-in fee and at least one month's rental."

The California Board immediately instituted an investigation of the outfit in La Verne which was exploiting the "Cosmic Rectifier."

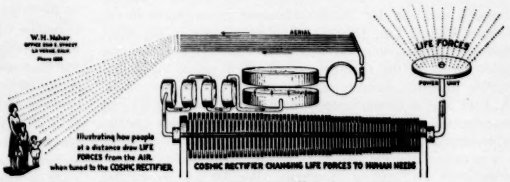
According to a report by the Board, one woman who had received diagnosis and treatment by Neher gave the following experiences: He requested her to write her name in full on a piece of paper with a lead pencil. This he placed on a metal plate and manipulated some dials on what appeared to be a large electrical apparatus with a series of numbers therein. She was then given a chart which indicated by pencil marks the various things from which she suffered, but at this point Neher varied his procedure from that of others who employ similar machines and told the patient that she was "tuned in" on what he called "universal intelligence" and that she would receive treatment by this means as long as she continued to pay $1 a month for this service. Shortly before the first month had passed, the patient remitted to Neher the required $1 and received a letter from him stating that she was receiving a fine amount of energy, that she was almost 100 per cent, and that in many points she had made a splendid gain.

Shortly after this report was made a complaint was filed in the city court of La Verne, charging Neher with violation of Section 2141 of the Business and Professions Code. A warrant was issued and the bail was fixed at $500. The defendant was arrested and arraigned and entered a plea of not guilty, and the case was set for trial. This case was subsequently dismissed for the purpose of filing a new complaint on other evidence. In the meantime the investigation continued, and evidence was brought to light that Neher was claiming that he could cure cancer, tumors, tuberculosis and other conditions by his system of radio wave treatments by simply "tuning in" a particular patient many miles away on his "Radio Rectifier." Subsequently Neher was found guilty of three of the six counts charged for asserted violation of the Business and Professions Code. He was sentenced to pay a fine of $600 or to spend forty days in the county jail. He paid the fine and the verdict was appealed. Nothing further developed in connection with this case in California.

During the latter part of June 1941 the Post Office Department at Washington issued a fraud order against W. H. Neher and the Private Laboratory of W. H. Neher and their officers and agents as such, at La Verne, Calif. The evidence in this order showed that Neher was a retired farmer, aged 69, possessing a high school education. The so-called laboratory was in a remodeled garage adjacent to his home. The enterprise was launched by Neher in the early part of 1938. An illustration depicting this procedure in Neher's promotional material is reproduced herewith. Neher claimed to have discovered his cosmic machine in 1932 as a result of research and reading of books on cosmic rays.

The charges alleged in substance that the respondents were engaged in obtaining remittances through the mails for so-called tuning-in and rental fees by means of false and fraudulent pretenses, representations and promises contained in written and printed matter sent through the mails to the effect that by placing "tuning-in" cards filled out by remitters in a so-called cosmic generator maintained in his "laboratory" Neher brings the bodies of said remitters into harmony with cosmic forces and thereby reduces the cause of and cures 99 per cent of every form of disease or ailment and, further, that these results will be accomplished regardless of the distance of the remitter from the said so-called cosmic generator.

According to the fraud order, Neher's claims were to the effect that he had discovered cosmic harmony through perfection of an alloy of aluminum which controlled and entrapped the vibratory forces of the body and in return, through the ether waves, treated the persons regardless of the distance they were from his laboratory. According to him, the theory was that there are twenty-eight rays which the human body is able to absorb through cosmic rays and that for each one of these rays there was a prayer and that each prayer was copied seven times. He claimed that the cosmic ray passed through the prayer cards on which the names of the persons applying for treatment were written, then through the prayers to the twenty-eight spindles, which again absorbed the cosmic rays, making a clear field


W. H. Neher
AERIAL
LIFE FORCES
Illustrating how people at a distance draw LIFE FORCES from the AIR, when tuned in the COSMIC RECTIFIER.
COSMIC RECTIFIER CHANGING LIFE FORCES TO HUMAN NEEDS

Reproduction of illustration from Neher's advertising.

from the prayers through the cards to the spindles. In making the spindles of aluminum alloy, a prayer and a number were inserted in the mold and then the hot aluminum metal poured therein, so that if it was prayer 1 or prayer 3 that spindle would be 1 and 3 and could not be any other prayer and could not be any other designated spindle. The device used by Neher for determining the progress of the person being treated was an instrument to which a string could be attached and swung on one's thumb. If it swung to the right it meant one thing, and if it swung to the left it meant another. It was on the basis of this apparatus that he was supposed to be able to determine the progress of any persons who asked or inquired as to how they were progressing with the treatment.

In a brief filed on behalf of the respondents it is contended that there was no showing of fraudulent intent on the part of Neher and that, therefore, the Postmaster General was without authority to issue a fraud order against him. It was pointed out, however, by the acting solicitor, Hon. W. E. Kelly, that the fraud order statutes are to protect the public and purge the mails of objectionable matter regardless of whether or not persons obtaining money through misrepresentation have personal knowledge of the falsity of their standards. It was further contended that the statements made by Neher in obtaining remittances through the mails were mere expressions of opinions and not actual representations of fact. The solicitor pointed out, however, that in the light of the claims made in the circular matter this contention is also without weight.

The respondents further contended that the results promised are sought to be accomplished by prayer and divine intervention, but Neher's own circular matter indicates that the alleged intervention of the Almighty for the accomplishment of the cures promised is dependent on the creation of a cosmic field for

"focalizing" cosmic rays "into the space between the discs" of his so-called generator. The testimony showed naturally that neither the "cosmic generator" nor any other machine known to science will create a cosmic field or change the direction of the cosmic rays. It was further noted that Neher's early promotional material made no mention of the Almighty or of prayer and that at the time of the first investigation he made no claim that the results were obtained through prayer or divine healing alone.

The respondents claimed that the evidence produced by the government consisted of mere opinion, but the evidence was shown to be based on well established scientific fact, and finally the testimony of Dr. Fred W. Norris, senior medical officer, Food and Drug Administration, Federal Security Agency, revealed that, in his own experience, divers persons suffering from cancer and other disorders who had believed themselves benefited by various forms of mental and religious treatment were found at autopsy not to have been in any way improved thereby. It was therefore recommended that a fraud order be issued, and said order was signed by the acting Postmaster General June 28, 1941.

Correspondence

ENCEPHALITIS IN THE YAKIMA VALLEY

To the Editor:—We would like to take exception to the statement made by Dr. W. W. Hammon (Encephalitis in the Yakima Valley, THE JOURNAL, July 19, p. 161) to the effect that we had recommended that physicians use hyperimmune rabbit serum in the treatment of Western equine encephalomyelitis in man. Actually our report in THE JOURNAL, Sept. 28, 1940, was a factual account of the results of treating the experimental disease in mice and guinea pigs with specific hyperimmune rabbit serum. The purpose of our investigations was to determine whether a virus disease could be treated with serum after the onset of symptoms. We did not recommend or even imply that our serum be used in treatment of the disease in man.

Other statements in the article made by Dr. Hammon are open to question. The first of these is that serum treatment in man would not be feasible because the dose of serum needed in man, based on that used by us in guinea pigs, would require that several liters be administered. Dr. Hammon assumes that the guinea pig data can be transferred directly to man, obviously a dangerous and unjustified assumption. Furthermore, he overlooks the fact that we used unrefined rabbit serum. It would be a simple matter to obtain several fold concentration of the antibodies, even assuming that the potency of the serum could not be increased by improvements in technic. One has only to recall the fact that serum therapy of pneumonia originally required enormous doses of serum in terms of cubic centimeters, whereas modern therapy enables the patient to receive larger doses of antibodies in very small volume.

Dr. Hammon also fails to show an appreciation of the quantitative aspect of serum therapy when he concludes that "the administration of additional serum could be expected to be of little or no value" because antibodies were found in the blood of many patients at a time when a clinical diagnosis was made. There is no indication whatever in his data that the concentration of antibodies in these patients was at all comparable to that present in the blood of animals successfully treated with serum of high potency, such as was used in our experiments. Following his line of reasoning, antitoxin therapy of diphtheria is useless because Underwood (*Lancet* **1**:364 [Feb. 16] 1935) has shown that in all 8 cases of diphtheria studied by him at the onset showed amounts of antitoxin in the blood ranging up to ⅕ unit or higher per cubic centimeter. Yet those patients having even as much as $\frac{1}{50}$ of a unit per cubic centimeter required the administration of antitoxin, 1 receiving 70,000 units.

The disadvantages of the early use of large amounts of heterologous serum so graphically portrayed by Dr. Hammon are, we believe, more imaginary than real. We are aware of the so-called adjuvant action of serum and would be cautious in using a truly heterologous serum. However, we must again call attention to the fact that we made no recommendation on using even a homologous serum. Since Dr. Hammon's own work brings out the apparently close relationship between encephalitis due to the Western equine encephalomyelitis and St. Louis viruses, it would seem feasible to attempt to develop a polyvalent serum against encephalitis due to these viruses.

In regard to Dr. Hammon's contention that Miss Howitt demonstrated as early as 1932 that horse and rabbit serum was effective in the treatment of the Western equine disease if given early enough but was ineffective when administered later, we feel that Miss Howitt did not conduct therapeutic studies in the usual sense of that term or in the manner in which we conducted our work, since she administered serum during periods ranging from twenty-four hours before injection of the virus to forty-eight hours after, at which time apparently the animals were still well, according to her description: "The temperature in guinea pigs is usually normal for the first day after inoculation, rising slightly on the second or third day, reaching a maximum by the end of the third or beginning of the fourth day and then dropping as the symptoms develop and the animal finally becomes prostrate. Death occurs usually on the fourth to the sixth day." The use of serum under the conditions cited by Miss Howitt would seem to us to be prophylaxis rather than therapy. Nevertheless, it is of interest to note that even with 3 cc. injections of rabbit serum intramuscularly (compared with from 20 to 50 cc. intraperitoneally in divided doses in our experiment) protection could be obtained in Miss Howitt's experiments against virus given intracerebrally four hours after inoculation with virus and in those given virus by intranasal instillation forty-eight hours after virus administration.

We would like to add that we were unaware of Miss Howitt's work when our studies were published, since her paper in the *Journal of Infectious Diseases* (**51**:493 [Nov.-Dec.] 1932) was published under the title "Equine Encephalomyelitis," with the subtitle "Recovery of the Virus of Equine Encephalomyelitis from the Blood of Experimentally Infected Animals." Obviously in our search of the literature we could see no indication from this title that the paper dealt with serum therapy. When Miss Howitt called our attention to her paper, we wrote her immediately, apologizing for not referring to it and indicating our intention of doing so in future publications.

H. J. SHAUGHNESSY, PH.D.
JOSEPH ZICHIS, PH.D.

Chief, Division of Laboratories, and Research Biochemist and Bacteriologist, respectively, State of Illinois, Department of Public Health.

1800 West Fillmore Street, Chicago.

SENSITIVITY IN DICTION

To the Editor:—I wish to enter what is no doubt a pedantic but nevertheless deeply sincere protest against the growing use in medical literature of the revolting term "goose pimples" or "goose bumps" instead of the proper expression, "goose flesh."

ROBERT W. BUCK, M.D., Boston.

Medical Examinations and Licensure

COMING EXAMINATIONS AND MEETINGS

ANNUAL CONGRESS ON MEDICAL EDUCATION AND LICENSURE

CHICAGO, Feb. 16-17, 1942. Council on Medical Education and Hospitals, Sec., Dr. William D. Cutter, 535 North Dearborn Street, Chicago.

NATIONAL BOARD OF MEDICAL EXAMINERS
EXAMINING BOARDS IN SPECIALTIES

Examinations of the National Board of Medical Examiners and Examining Boards in Specialties were published in THE JOURNAL, August 23, page 637.

BOARDS OF MEDICAL EXAMINERS

ALABAMA: Montgomery, June 16-18. Sec., Dr. J. N. Baker, 519 Dexter Ave., Montgomery.

ARKANSAS: * *Medical.* Little Rock, Nov. 6-7. Sec., Dr. D. L. Owens, Harrison. *Eclectic.* Little Rock, Nov. 6. Sec., Dr. Clarence H. Young, 1415 Main St., Little Rock.

CALIFORNIA: *Oral examination* (required when reciprocity application is based on a state certificate or license issued ten or more years before filing application in California), San Francisco, Oct. 1. *Written.* Sacramento, Oct. 20-23. Sec., Dr. Charles B. Pinkham, 1020 N St., Sacramento.

COLORADO: * *Examination.* Denver, Oct. 7. *Endorsement.* Denver, Oct. 8-10. Sec., Dr. George R. Buck, 831 Republic Bldg., Denver.

CONNECTICUT: *Medical. Examination.* Hartford, Nov. 11-12. *Endorsement.* Hartford, Nov. 25. Sec., Dr. Creighton Barker, 258 Church St., New Haven. *Homeopathic.* Derby, Nov. 11-12. Sec., Dr. Joseph H. Evans, 1488 Chapel St., New Haven.

DELAWARE: Dover, July 14-16. Sec., Medical Council of Delaware, Dr. Joseph S. McDaniel, 229 S. State St., Dover.

DISTRICT OF COLUMBIA: * Washington, Nov. 10-11. Sec., Dr. George C. Ruhland, 6150 East Municipal Bldg., Washington.

FLORIDA: * Jacksonville, Nov. 24-25. Sec., Dr. William M. Rowlett, Box 786, Tampa.

GEORGIA: Atlanta, Oct. 14-15. Sec., State Examining Boards, Mr. R. C. Coleman, 111 State Capitol, Atlanta.

IDAHO: Boise, Oct. 7. Dir., Bureau of Occupational License, Mr. Walter Curtis, 355 State Capitol Bldg., Boise.

ILLINOIS: Chicago, Oct. 14-16. Supt. of Registration, Mr. Lucien A. File, Department of Registration and Education, Springfield.

INDIANA: Indianapolis, June 16-18. Sec., Board of Registration and Examination, Dr. J. W. Bowers, 301 State House, Indianapolis.

KANSAS: Kansas City, Sept. 23-24. Sec., Board of Medical Registration and Examination, Dr. J. F. Hassig, 905 N. 7th St., Kansas City.

KENTUCKY: Louisville, Dec. 8-10. Sec., Dr. A. T. McCormack, 620 S. Third St., Louisville.

MAINE: Portland, Nov. 12-13. Sec., Board of Registration of Medicine, Dr. Adam P. Leighton, 129 State St., Portland.

MARYLAND: *Medical.* Baltimore, Dec. 9-12. Sec., Dr. John T. O'Mara, 1215 Cathedral St., Baltimore. *Homeopathic.* Baltimore, Dec. 9-10. Sec., Dr. John A. Evans, 912 W. 40th St., Baltimore.

MASSACHUSETTS: Boston, Nov. 4-7. Sec., Board of Registration in Medicine, Dr. Stephen Rushmore, 413-F State House, Boston.

MICHIGAN: * Lansing, Oct. 15-17. Sec., Board of Registration in Medicine, Dr. J. Earl McIntyre, 203 Hollister Bldg., Lansing.

MINNESOTA: * Minneapolis, Oct. 21-23. Sec., Dr. J. F. Du Bois, 230 Lowry Medical Arts Bldg., St. Paul.

MISSISSIPPI: *Reciprocity.* Jackson, December. Asst. Sec., State Board of Health, Dr. R. N. Whitfield, Jackson.

MISSOURI: Kansas City, Oct. 29-31. Sec., State Board of Health, Dr. James Stewart, State Capitol Bldg., Jefferson City.

MONTANA: Helena, Oct. 6-8. Sec., Dr. Otto G. Klein, First National Bank Bldg., Helena.

NEW HAMPSHIRE: Concord, Sept. 11-12. Sec., Board of Registration in Medicine, Dr. T. P. Burroughs, State House, Concord.

NEW JERSEY: Trenton, Oct. 21-22. Sec., Dr. E. S. Hallinger, 28 W. State St., Trenton.

NEW MEXICO: Santa Fe, Oct. 13-14. Sec., Dr. Le Grand Ward, 135 Sena Plaza, Santa Fe.

NEW YORK: Albany, Buffalo, New York and Syracuse, Sept. 15-18. Chief, Bureau of Professional Examinations, Mr. Herbert J. Hamilton, State Education Department, 315 Education Bldg., Albany.

NORTH CAROLINA: *Endorsement.* December. Sec., Dr. W. D. James, Hamlet.

NORTH DAKOTA: Grand Forks, Jan. 6-9. Sec., Dr. G. M. Williamson, 4½ S. Third St., Grand Forks.

OKLAHOMA: * *Reciprocity.* Oklahoma City, Dec. 10. Sec., Dr. James D. Osborn, Jr., Frederick.

PENNSYLVANIA: Philadelphia, January. Acting Sec., Bureau of Professional Licensing, Mrs. Marguerite G. Steiner, 358 Education Bldg., Harrisburg.

RHODE ISLAND: * Providence, Oct. 2-3. Sec., Division of Examiners, Dr. Robert M. Lord, 366 State Office Bldg., Providence.

SOUTH DAKOTA: * Pierre, Jan. 13-14. Dir., Medical Licensure, Dr. J. F. D. Cook, State Board of Health, Pierre.

TEXAS: Austin, Nov. 17-19. Sec., Dr. T. J. Crowe, 918 Texas Bank Bldg., Dallas.

VERMONT: Burlington, Feb. 10-12. Sec., Board of Medical Registration, Dr. F. J. Lawliss, Richford.

VIRGINIA: Richmond, Dec. 9-12. Sec., Dr. J. W. Preston, 30½ Franklin Road, Roanoke.

WEST VIRGINIA: Charleston, Nov. 17-19. Sec., Public Health Council, Dr. C. F. McClintic, State Capitol, Charleston.

WISCONSIN: * Madison, Jan. 13-15. Sec., Dr. H. W. Shutter, 425 E. Wisconsin Ave., Milwaukee.

WYOMING: Cheyenne, Oct. 6-7. Sec., Dr. M. C. Keith, State Capitol Bldg., Cheyenne.

* Basic Science Certificate required.

BOARDS OF EXAMINERS IN THE BASIC SCIENCES

ARIZONA: Tucson, Sept. 16. Sec., Mr. Franklin E. Roach, Science Hall, University of Arizona, Tucson.

COLORADO: Denver, Sept. 10-11. Sec., Dr. Esther B. Starks, 1459 Ogden St., Denver.

CONNECTICUT: Oct. 11. Address State Board of Healing Arts, 1945 Yale Station, New Haven.

DISTRICT OF COLUMBIA: Washington, Oct. 20-21. Sec., Dr. George C. Ruhland, 6150 East Municipal Bldg., Washington.

FLORIDA: DeLand, Nov. 1. Final date for filing application is Oct. 17. Sec., Professor J. F. Conn, John B. Stetson University, DeLand.

IOWA: Des Moines, Oct. 14. Dir., Division of Licensure and Registration, Mr. H. W. Grefe, Capitol Bldg., Des Moines.

MINNESOTA: Minneapolis, Oct. 7-8. Sec., Dr. J. C. McKinley, 126 Millard Hall, University of Minnesota, Minneapolis.

NEBRASKA: * Lincoln, Oct. 7-8. Dir., Bureau of Examining Boards, Mrs. Jeannette Crawford, 1009 State Capitol Bldg., Lincoln.

OREGON: Portland, Nov. 1. Final date for filing application is Oct. 15. Sec., State Board of Higher Education, Mr. Charles D. Byrne, University of Oregon, Eugene.

RHODE ISLAND: Providence, Nov. 19. Chief, Division of Examiners, Mr. Thomas B. Casey, 366 State Office Bldg., Providence.

SOUTH DAKOTA: Aberdeen, Dec. 5-6. Dir., Bureau of Evans, Yankton.

WISCONSIN: Madison, Sept. 20. Sec., Professor Robert N. Bauer, 3414 W. Wisconsin Ave., Milwaukee.

Connecticut March Report

The Connecticut Medical Examining Board reports the written examination for medical licensure held at Hartford, March 11-12, 1941. The examination covered 9 subjects and included 70 questions. An average of 75 per cent was required to pass. Thirty-six candidates were examined, 17 of whom passed and 19 failed. The following schools were represented:

School	PASSED	Year Grad.	Per Cent
Yale University School of Medicine	(1938) 75.1,	(1940)	78.9*
Loyola University School of Medicine		(1940)	76.8
Northwestern University Medical School		(1940)	79†
University of Michigan Medical School		(1940)	78
Columbia University College of Physicans and Surgeons		(1938)	77*
Long Island College of Medicine		(1939)	79.3
New York Medical College, Flower and Fifth Avenue Hospitals		(1939)	79.9
Jefferson Medical College of Philadelphia		(1938)	75.1
University of Tennessee College of Medicine		(1939)	77.1
Medizinische Fakultät der Universität Wien (1937) 76.9, (1938) 75.8		(1936)	76.4,*
Albert-Ludwigs-Universität Medizinische Fakultät, Freiburg		(1937)	78.3
Friedrich-Wilhelms-Universität Medizinische Fakultät, Berlin		(1926)	75.5*
Johann Wolfgang Goethe-Universität Medizinische Fakultät, Frankfurt-am-Main		(1933)	80.2
Universität Heidelberg Medizinische Fakultät		(1927)	79.2*

School	FAILED	Year Grad.	Number Failed
Harvard Medical School		(1935)	1
Marquette University School of Medicine		(1940)	1
Medizinische Fakultät der Universität Wien (1936), (1937), (1938), 2		(1930),	5
Ludwig-Maximilians-Universität Medizinische Fakultät, München		(1920), (1925)	2
Universität Heidelberg Medizinische Fakultät		(1920), (1922)	2
Magyar Királyi Pázmány Petrus Tudományegyetem Orvosi Fakultasa, Budapest		(1938)	1
Regia Università degli Studi di Bologna. Facoltà di Medicina e Chirurgia		(1937)	1
Regia Università degli Studi di Roma. Facoltà di Medicina e Chirurgia		(1937)	1
Regia Università di Napoli Facolta di Medicina e Chirurgia		(1936), (1938)	2
Universität Bern Medizinische Fakultät		(1937)	1
Université de Genève Faculté de Médecine		(1935)	1
Osteopath ‡			1

Fifteen physicians were successful in the oral examination held for endorsement applicants at Hartford, March 25. The following schools were represented:

School	PASSED	Year Grad.	Endorsement of
University of Alabama School of Medicine		(1920)*	Alabama
Yale University School of Medicine		(1936)*	N.B.M.Ex.
Northwestern University Medical School		(1938*	N.B.M.Ex.
State University of Iowa College of Medicine		(1925)	Iowa
Johns Hopkins Univ. School of Medicine		(1927), (1932)	N. B. M. Ex.
University of Maryland School of Medicine and College of Physicians and Surgeons		(1937)*	Maryland
Tufts College Medical School	(1932) Maine, (1938),*	(1939)	N. B. M. Ex.
New York Medical College, Flower and Fifth Avenue Hospitals		(1939)	N. B. M. Ex.
Western Reserve University School of Medicine		(1933)*	Ohio
Temple University School of Medicine		(1936)	New Jersey
University of Vermont College of Medicine		(1939)*	N.B.M.Ex.
McGill University Faculty of Medicine		(1931)	New Jersey

* Licenses have not been issued.

† This applicant has received the M.B. degree and will receive the M.D. degree on completion of internship.

‡ Examined in medicine only.

Bureau of Legal Medicine and Legislation

MEDICOLEGAL ABSTRACTS

Privileged Communications: Authorization for Attending Physician to Disclose Information to Insurer Not Authorization to Testify in Court Proceedings.—The defendant insurance company issued a policy of life insurance to Noble based on an application signed by him Aug. 26, 1936. The application, which the insured signed without reading and without completing, authorized any physician who attended him to disclose to the insurer any information thus acquired and stated that he was in good health at that time and had not consulted a physician in the past ten years. As a matter of fact, when Noble signed the application he was not feeling well, had been treated by physicians during the preceding two months and so informed the insurance agent who solicited his application. The insurance agent, however, told Noble that those facts "made no difference" and instructed him to sign the application, informing him that he, the insurance agent, would complete it. In November 1936 Noble learned that he was suffering from "tuberculosis of the throat," from which ailment he died in March 1937. The insurance company then rescinded the policy and, on the ground that the disease from which the insured died antedated the issuance of the policy, returned to his widow the premiums paid on the policy. In a suit on the policy the widow recovered judgment and the insurance company appealed to the Supreme Court of Iowa.

The trial court refused to receive the testimony of Noble's attending physician that Noble was afflicted with tuberculous laryngitis when the application was made in August 1936 on the ground that the testimony was a privileged communication under Section 11263, Iowa Code, the material part of which reads, as follows:

> No . . . physician . . . who obtains such information by reason of his employment . . . shall be allowed, in giving testimony, to disclose any confidential communication properly intrusted to him in his professional capacity, and necessary and proper to enable him to discharge the functions of his office according to the usual course of practice or discipline. Such prohibition shall not apply to cases where the party in whose favor the same is made waives the rights conferred.

The insurer contended that the provision in the application that authorized any physician who attended the applicant to disclose to the insurer any information thus acquired authorized the attending physician to reveal information so obtained in a court of law. The statute just referred to, said the Supreme Court of Iowa, does not prohibit a physician from disclosing any confidential communications. It merely prohibits him from giving testimony. The court then adverted to *Moutzoukos* v. *Mutual Benefit Health & Accident Ass'n*, 69 Utah 309, 254 P. 1005, in which case the insured had answered "yes" to the following question in an application: "Do you agree that any physician who has ever treated you may give information within his knowledge as to your past or present physical condition?" The Utah court held that this did not permit an attending physician to testify in court, saying:

> The plaintiff's willingness to allow any physician that had ever treated him to give information within his knowledge as to plaintiff's past or present physical condition should not be construed as a consent that said physicians might testify to such information against the plaintiff in an action to recover on the policy. Such an interpretation of the language used would violate the rule that doubtful provisions should be construed in favor of the insured.

Here, continued the Supreme Court of Iowa, the insurance policy was drafted by the insurance company, and, under well known principles of law, any doubtful provisions in the contract should be strictly construed against the company. A reading of the policy and application indicates that the purpose of the statement in question was to permit the insurance company to question physicians of the insured relative to his health before assuming the risk. The consent of Noble that his physician reveal his condition to the insurance company does not in any way refer to the statute granting the privilege because the statute relates only to the giving of testimony. Therefore the statute was not waived either directly or by implication.

The insurance company in support of its contention relied on *Luce* v. *Service Insurance Company*, 227 Iowa 532, 288 N. W. 681, in which case an insured had signed an application providing that "All provisions of law forbidding any physician or other person who attended the deceased from disclosing any knowledge or information acquired by him are hereby waived and such physician is hereby authorized to make such disclosure." But the Iowa privileged communication law, answered the court, prohibits the giving of testimony. The waiver involved in the Luce case expressly authorized the physician to testify by waiving the statute. Medical ethics prohibit a physician from disclosing to any one a confidential communication revealed to him by his patient, but the statute in question does not, as it simply prohibits the attending physician from testifying in a proceeding in which the witness is under oath. Clearly the physician's statement to the insurance company would not be testimony, and the physician would have the legal right to make a disclosure under such circumstances without the consent of the insured. An authorization such as contained in the application here involved simply releases the attending physician from his ethical obligation to tell no one. The court accordingly concluded that the trial court was correct in refusing to admit the testimony of the attending physician. However, for reasons not here material, the judgment in favor of the widow was reversed.—*Noble v. United Ben. Life Ins. Co., 297 N. W. 881 (Iowa, 1941).*

Society Proceedings

COMING MEETINGS

American Academy of Ophthalmology and Otolaryngology, Chicago, Oct. 19-23. Dr. William P. Wherry, 107 South 17th St., Omaha, Executive Secretary.

American Academy of Pediatrics, Boston, Oct. 8-11. Dr. Clifford G. Grulee, 636 Church St., Evanston, Ill., Secretary.

American Association for the Study of Neoplastic Diseases, Washington, D. C., Sept. 4-6. Dr. Eugene R. Whitmore, 2139 Wyoming Ave. N.W., Washington, D. C., Secretary.

American Association of Obstetricians, Gynecologists and Abdominal Surgeons, Hot Springs, Va., Sept. 11-13. Dr. James R. Bloss, 418 Eleventh St., Huntington, W. Va., Secretary.

American Association of Railway Surgeons, Chicago, Sept. 8-10. Dr. Daniel B. Moss, 547 West Jackson Blvd., Chicago, Secretary.

American Clinical and Climatological Association, Skytop, Pa., Oct. 16-18. Dr. Francis M. Rackemann, 263 Beacon St., Boston, Secretary.

American Congress of Physical Therapy, Washington, D. C., Sept. 1-5. Dr. Richard Kovacs, 2 East 88th St., New York, Secretary.

American Hospital Association, Atlantic City, N. J., Sept. 15-19. Dr. Bert W. Caldwell, 18 East Division St., Chicago, Executive Secretary.

American Public Health Association, Atlantic City, N. J., Oct. 14-17. Dr. Reginald M. Atwater, 50 West 50th St., New York, Executive Secretary.

American Roentgen Ray Society, Cincinnati, Sept. 23-26. Dr. Carleton B. Peirce, Royal Victoria Hospital, Montreal, Canada, Secretary.

Central Association of Obstetricians and Gynecologists, New Orleans, Oct. 2-4. Dr. William F. Mengert, 515 Newton Road, Iowa City, Secretary.

Clinical Orthopaedic Society, Cleveland and Akron, Ohio, Oct. 3-4. Dr. Myron O. Henry, 825 Nicollet Ave., Minneapolis, Secretary.

Colorado State Medical Society, Estes Park, Sept. 17-20. Mr. Harvey T. Sethman, 537 Republic Bldg., Denver, Executive Secretary.

Delaware, Medical Society of, Wilmington, Oct. 7-8. Dr. C. L. Munson, 1015 Washington St., Wilmington, Secretary.

District of Columbia, Medical Society of the, Washington, Sept. 30-Oct. 2. Mr. Marvin Wiprud, 1718 M Street N.W., Washington, Secretary.

Indiana State Medical Association, Indianapolis, Sept. 23-25. Mr. Thomas A. Hendricks, 23 East Ohio St., Indianapolis, Executive Secretary.

Kentucky State Medical Association, Louisville, Sept. 29-Oct. 3. Dr. Arthur T. McCormack, 620 South Third St., Louisville, Secretary.

Michigan State Medical Society, Grand Rapids, Sept. 16-18. Dr. L. Fernald Foster, 2020 Olds Tower, Lansing, Secretary.

Mississippi Valley Medical Society, Cedar Rapids, Iowa, Oct. 1-3. Dr. Harold Swanberg, 310 Maine St., Quincy, Ill., Secretary.

Nevada State Medical Association, Elko, Sept. 26-27. Dr. Horace J. Brown, P. O. Box 698, Reno, Secretary.

Oregon State Medical Society, Portland, Sept. 3-6. Dr. M. L. Bridgeman, 1020 S. W. Taylor St., Portland, Secretary.

Pacific Association of Railway Surgeons, Salt Lake City, Sept. 12-13. Dr. W. T. Cummins, 1400 Fell St., San Francisco, Secretary.

Pennsylvania, Medical Society of the State of, Pittsburgh, Oct. 6-9. Dr. Walter F. Donaldson, 500 Penn Ave., Pittsburgh, Secretary.

Rocky Mountain Medical Conference, Yellowstone Park, Wyo., Sept. 2-4. Mr. Harvey T. Sethman, 1612 Tremont Place, Denver, Secretary.

Vermont State Medical Society, Burlington, Oct. 2-3. Dr. Benjamin F. Cook, 154 Bellevue Ave., Rutland, Secretary.

Virginia, Medical Society of, Virginia Beach, Oct. 6-8. Miss A. V. Edwards, 1200 East Clay St., Richmond, Secretary.

Wisconsin, State Medical Society of, Madison, Sept. 10-12. Mr. G. B. Larson, 110 East Main St., Madison, Acting Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1931 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied by stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

Alabama State Medical Assn. Journal, Montgomery

10:397-472 (June) 1941

Shifting Scenes of Medical Practice: President's Message. S. A. Gordon, Marion.—p. 397.
Gastric Hemorrhage: Its Significance and Management. J. P. Chapman, Selma.—p. 403.
Treatment of Diabetes Mellitus: Difficulties Encountered in Rural Population. A. Mazyck, Dothan.—p. 406.
Enuresis: Review of Literature on Etiology and Treatment. S. P. Wainwright, Birmingham.—p. 408.

American Journal of Medical Sciences, Philadelphia

201:785-932 (June) 1941

Possible Adaptation to Low Vitamin B_1 Intake. F. M. Meyers, Petoemboekan, East Coast of Sumatra, Netherland East Indies.—p. 785.
Response of Blood Donors to Iron. A. C. Santy, New York.—p. 790.
*Bee Venom in Treatment of Chronic Arthritis. J. L. Hollander, Philadelphia.—p. 796.
Heberden's Nodes: Heredity in Hypertrophic Arthritis of Finger Joints. R. M. Stecher, Cleveland.—p. 801.
Seasonal Variation in Water Content of Respiratory Tract of Birds and Mammals. E. M. Boyd and G. M. Johnston, Kingston, Ont., Canada.—p. 810.
Effect of Phenobarbital on Normal and Impaired Dextrose Tolerance. J. A. Rosenkrantz and M. Bruger, New York.—p. 815.
Dietary Hypercholesterolemia. A. Steiner and Beatrice Domanski, New York.—p. 820.
Incidence of Certain Signs and Symptoms at Various Levels of Basal and Total Resting Metabolism: Analysis of 1,000 Cases. J. J. Short, New York.—p. 824.
Prothrombin Studies in Pulmonary Tuberculosis. J. W. Savacool, Philadelphia.—p. 830.
Survival Time After Transfusion of Erythrocytes of Citrated Human Blood Stored at from 4 to 6 Centigrade. W. P. Belk and B. C. Barnes, Philadelphia.—p. 838.
Effect of Glucose in Preservation of Citrated Human Blood Stored at from 4 to 6 Centigrade. W. P. Belk and Florence Rosenstein, Philadelphia.—p. 841.
Leukemoid Reactions. J. M. Hill, Dallas, Texas, and C. N. Duncan, Boston.—p. 847.
Atrioventricular Nodal Rhythm. N. Flaxman, Chicago.—p. 857.
Tibial Artery Changes in Comparison with Those of Radial and Coronary Arteries. S. W. Sappington and J. A. Horneff, Philadelphia.—p. 862.
Reactivity of Intracranial Vessels in the Aged. D. E. Cameron, Albany, N. Y., and S. R. Rosen, Boston.—p. 871.
Effect of Pregnancy on Experimental Hypertension in Rabbit. J. D. Corbit Jr., Philadelphia.—p. 876.
Fibrillary Twitchings: Investigation of Their Site of Origin. C. H. Sheldon and H. W. Woltman, Rochester, Minn.—p. 884.
Animal Experiments Concerning Hormone Therapy of Testicular Atrophy. H. Selye and S. M. Friedman, Montreal, Canada.—p. 886.

Bee Venom in Chronic Arthritis.—Hollander administered bee venom to 42 patients with rheumatic disease. The ages of the patients ranged from 23 to 69 years, and the duration of the disease from five months to thirty-three years. Foci of infection were eliminated before treatment was begun. The diet was low in carbohydrate, high in vitamins and of adequate caloric value. No other treatment was given. To obviate any psychic benefit, 17 similar patients were given injections of a mild nonspecific protein solution. None of the 42 patients with chronic arthritis were completely relieved; 3 were definitely improved, 5 were moderately better, 9 experienced some relief but relapsed soon after the injections were discontinued, 22 were unaffected and 3 were definitely worse. Of the control series 3 were improved, 5 were better while receiving injections but obtained no lasting benefit, and the condition of 9 was unchanged. The filamented-nonfilamented neutrophil ratio did not closely follow the degree of apparent benefit, but 7 had shifts toward normal. Untoward reactions were uncommon. In several instances the local reaction was excessive, the wheals showing pseudopod formation and edema. Two patients showed symptoms of toxicity, necessitating termination of treatment.

American Journal of Tropical Medicine, Baltimore

21:369-506 (May) 1941

*Rocky Mountain Spotted Fever: Results of Fifteen Years' Prophylactic Vaccination. R. R. Parker, Hamilton, Mont.—p. 369.
Immunization Against Yellow Fever with Consideration of Effects of Virulent Neurotropic Strain on Central Nervous System of Monkeys. A. W. Sellards, Boston.—p. 385.
Experimental Human Infection with Sparganum Larva of Spirometra Mansonoides (Mueller, 1935). J. F. Mueller and F. Coulston.—p. 399.
Classification of Strains of Candida (Monilia) Isolated from Sputum. K. L. Burt and Helen M. Ketchum, Howell, Mich.—p. 427.
Recent Observations on Coccidioides Infection. J. F. Kessel, Los Angeles.—p. 447.
Toxic Reactions Following Use of Atabrine in Malaria. W. N. Bispham, Baltimore.—p. 455.
Evaluation of Drugs in Experimental Leishmaniasis. H. Y. Soong and H. H. Anderson, Peiping, China.—p. 461.
Drug Resistance Acquired During Treatment of Sleeping Sickness with Tryparsamide and with Bayer 205. F. Hawking, Tanganyika Territory, East Africa.—p. 469.
Comparison of Incidence of Filariasis (Wuchereria Bancrofti) in Islands of St. Thomas and St. Croix. G. M. Saunders, Charlotte Amalie, Virgin Islands, U. S. A.—p. 481.
Plasma Vitamin C Levels in Group of Children Before and After Dietetic Adjustment. D. F. Milam, Durham, N. C., and W. Wilkins, Raleigh, N. C.—p. 487.
Studies in Bite Desensitization. Barbara C. McIvor and L. S. Cherney, San Francisco.—p. 493.

Rocky Mountain Spotted Fever.—Parker presents data on the protective value of vaccination against Rocky Mountain spotted fever based on fifteen years of use in an area of western Montana, a two year test among a highly exposed occupational group in an area of southern Idaho, and on thirteen years of experience in sections of the West other than the western Montana area. The duration of protection seldom exceeds the year of vaccination. Annual immunization appears to be the only safe procedure. Persons vaccinated only once who become infected that same season have sufficient protection to modify the infection, to insure recovery and to shorten convalescence. Persons vaccinated more than once are better protected, and evidence suggests that some such persons carry a degree of immunity into at least the year following the last vaccination. Full protection is frequent against strains of low virulence but is at most only occasional against highly virulent strains. Children are more fully and more frequently protected than adults. If a person is infected during the period of immunization, his subsequent clinical course will be affected favorably even in areas with high fatality rates. In areas with predominant mild infections and prolonged periods of incubation the administration of vaccine soon after tick bite may ameliorate an impending infection. This is not recommended under reverse circumstances unless the patient has been vaccinated previously.

American Review of Tuberculosis, New York

43:713-860 (June) 1941

Clinical Diagnosis of Primary Carcinoma of Lung. S. Diamond, Legion, Texas.—p. 713.
*Bronchomoniliasis. C. J. Koerth, J. M. Donaldson Jr. and R. G. McCorkle, San Antonio, Texas.—p. 723.
Lipoid Pneumonia: Report of Case Simulating Bronchial Carcinoma. J. J. Singer and L. J. Tragerman, Los Angeles.—p. 738.
Management of Syphilis in Tuberculous Patient. P. Murphy and L. Bromberg, St. Louis.—p. 748.
Dualistic Concept of Phthisis. I. Rappaport, New York.—p. 761.
Contralateral Lung in Pulmonary Tuberculosis. A. D. Calomeni, Saginaw, Mich.—p. 767.
Bronchial Stenosis and Unexpandable Lungs: Report of Two Cases. J. E. Farber, Buffalo.—p. 779.
Paraffin Pack in Treatment of Pulmonary Tuberculosis. F. Ottaviano, New York.—p. 785.
Insatiable Pneumothorax: Remarks to Paper of Dr. E. Korol. M. Lucacer, Brooklyn.—p. 793.
Patch and Purified Protein Derivative Tests and X-Ray Correlation. P. D. Crimm, H. N. Cookson and M. Broadbent, Evansville, Ind.—p. 799.
Vole Acid-Fast Bacillus: I. Experimental Studies on New Type of Mycobacterium Tuberculosis. W. S. Brooke, Baltimore.—p. 806.
Carbohydrate Content of Proteins in Blood Serum, Cantharidin Blisters and Pleural Effusions. B. Lustig, London, England, and E. Nassau, Harefield, England.—p. 817.
Complement Fixation in Tuberculous Dogs. C. C. Shepard, Ruth W. Jung, Charlotte A. Colwell, F. D. Gunn and E. A. Barth, Chicago.—p. 825.
Psychologic Testing of Tuberculous Patients: Intelligence, Occupational Preferences and Clerical Aptitudes of Tuberculous Patients, with Reference to Rehabilitation Program. I. T. Schultz and H. Rush, Indianapolis.—p. 839.

Bronchomoniliasis.—Koerth and his co-workers report 2 cases of bronchomoniliasis. The sputum of the first patient contained a monilia identified by one investigator as Monilia candida and by another as Monilia tropicalis. This patient

presented an unusual roentgenogram, successive involvement and subsequent resolution in different parts of both lungs. The roentgenogram in case 2 showed chronic productive tuberculosis with cavitation, fibrosis and calcification. Tubercle bacilli were never demonstrated in the sputum, while M. tropicalis was constantly present. Another interesting feature was a pharyngeal ulcer from which M. tropicalis was isolated. A feature common to the two cases was the extent of the pulmonary pathologic changes and the scarcity of symptoms. The fact that the patient's blood serum agglutinated the organism while the serum of controls did not is evidence that the monilia was the causative organism in case 1. The occurrence of positive cutaneous reactions in case 2, while controls showed no reaction to a suspension of the monilia, is of significance. Pathogenicity for laboratory animals was not demonstrated for the organism isolated from the sputum in either case. Iodides have been found to be efficacious. Iodide therapy may well be supplemented by subcutaneous injections of vaccines prepared from cultures of the organism isolated from the patient's sputum. Tar, thymol, gentian violet and methylene blue also have been useful.

Archives of Neurology and Psychiatry, Chicago

45:903-1072 (June) 1941

Electroencephalographic Classification of the Epilepsies. H. Jasper and J. Kershman, Montreal, Canada.—p. 903.
Involutional Melancholia: Review with Additional Cases. A. A. Werner, St. Louis; E. F. Hoctor and C. C. Ault, Farmington, Mo.—p. 944.
Paranoid Syndrome. C. W. Miller Jr., Medical Lake, Wash.—p. 953.
Human Pyramidal Tract: III. Magnitude of Large Cells of Motor Area (Area 4). A. M. Lassek, Charleston, S. C.—p. 964.
Peripheral Blood Flow in Schizophrenia and Other Abnormal Mental States: Plethysmographic Study. D. I. Abramson, N. Schkloven and K. H. Katzenstein, Cincinnati.—p. 973.
Encephalopathy Due to Burns: Report of Case. N. Roth, New York.—p. 980.
Intracranial Chordoma. H. Zeitlin and S. A. Levinson, Chicago.—p. 984.
Pilocarpine Sweating Test: I. Valid Indicator in Differentiation of Preganglionic and Postganglionic Sympathectomy. O. R. Hyndman and J. Wolkin, Iowa City.—p. 992.
Sublingual Absorption of Prostigmine Bromide. H. M. Salzer, Cincinnati.—p. 1007.
Porencephalic Cyst: Report of Case with Arteriographic Studies. V. W. Eisenstein and H. K. Taylor, New York.—p. 1009.

Archives of Otolaryngology, Chicago

33:909-1122 (June) 1941

Estrogens and Their Effect on Ciliated Mucosa. E. M. Boyd, J. W. Clark and W. F. Perry, Kingston, Ont., Canada.—p. 909.
Modern Treatment of Otosclerosis. V. Nasiell, Stockholm, Sweden.—p. 916.
*Acute Laryngotracheobronchitis: Analysis of Sixty-Two Cases with Report of Autopsies in Eight Cases. H. B. Orton, E. L. Smith, H. O. Bell and R. A. Ford, Newark, N. J.—p. 926.
Chemotherapy: E. E. Osgood, Portland, Ore.—p. 961.
Changes in Vestibular Sensitivity in Ménière's Syndrome and Their Significance. M. Atkinson, New York.—p. 969.
Involvement of Jaw Joint in Acute Suppurative Otitis Media. G. E. Shambaugh Jr., Chicago.—p. 975.
Vasomotor Rhinitis: Proposed Classification Based on Analysis of Seventy-Four Cases. E. Urbach, Philadelphia.—p. 982.
Surgical and Nonsurgical Care of Chronically Discharging Middle Ear. Rea E. Ashley, San Francisco.—p. 993.
Experiences with Endaural Surgery: Preliminary Report. L. F. Johnson and B. Zonderman, Boston.—p. 1004.
Clinical Significance of Aural Polyps. F. L. Lederer, Chicago.—p. 1008.
Peroral Endoscopy. L. H. Clerf, Philadelphia.—p. 1042.

Laryngotrachoeobronchitis.—From an analysis by Orton and his associates of 62 cases of acute laryngotracheobronchitis in children and 8 postmortem studies, it appears that more than half of the patients had previous colds or infections of the upper part of the respiratory tract in which the predominating organism was a streptococcus. The average duration of illness before hospitalization was usually three days. Forty of the patients were males and 22 females; 47 were less than 3 years of age. The ages of others extended over the first decade. There were 17 deaths. Acute laryngotracheobronchitis in young children is an important problem both for the general practitioner and for the pediatrician. Its proper handling requires early recognition. When signs of obstructive dyspnea appear, valuable time should not be wasted by giving diphtheria antitoxin. When acute laryngotracheobronchitis is suspected, the patient should be transferred to a hospital where direct laryngoscopy and bronchoscopy and a more active treatment such as intubation and tracheotomy (the operation of choice) may be done at a moment's notice. If time permits, roentgen study should be made prior to operation; otherwise it should follow the tracheotomy. Intubation should be done only for immediate relief; it should be followed by tracheotomy. Patients should be in a room with the temperature at 70 F. and the air supersaturated. This provides a more comfortable environment than the old fashioned hot croup tent. The temperature and humidity have more effect on comfort than does the concentration of oxygen.

Bulletin New York Academy of Medicine, New York

17:403-484 (June) 1941

Utilization of Selective Microbial Agents in Study of Biologic Problems. R. J. Dubos, New York.—p. 405.
Present Status of Treatment of Subacute Bacterial Endocarditis. A. C. DeGraff, New York.—p. 423.
Treatment of Infections by Methods Other Than Chemotherapy. W. Thalhimer, New York.—p. 434.
Infections of Middle Ear and Nasal Sinuses. W. C. Bowers, New York.—p. 453.
Critical Evaluation of Results of Routine Conservative Treatment of Syphilis. H. T. Hyman, New York.—p. 467.

Michigan State Medical Society Journal, Muskegon

40:409-488 (June) 1941

Gonococcic Infections: Diagnosis and Criterion of Cure. A. Jacoby, New York.—p. 435.
*Gonorrhea in the Female. R. Deakin and D. R. Smith, St. Louis.—p. 440.
*Gonorrhea in the Male: Modern Treatment. P. S. Pelouze, Philadelphia.—p. 444.
Primary Tuberculous Infection in the Adult. H. C. Sweany, Chicago.—p. 448.
Cyanosis of Newborn. C. F. McKhann, Ann Arbor.—p. 455.
Early Beginnings of Preventive Medicine in Michigan. E. E. Kleinschmidt, Chicago.—p. 458.

Gonorrhea in the Female.—Deakin and Smith believe that the most important consideration in the treatment of gonorrhea in women is the consistency with which chemotherapy renders them noninfectious at the end of five days. The control of gonorrhea is predicated on its effective treatment in women. Rapid sterilization of their infection is of paramount importance, for it prevents spread of the infection to the male, it prevents complications, which so frequently occur at the time of menstruation, and it decreases the incidence of gonorrheal ophthalmia. It is not advantageous to continue the sulfonamide therapy for more than a week. If the desired result is not obtained in this time, it is more than likely that it will not be obtained. It appears that prolonged sulfonamide therapy prevents the development of an immunity response to the gonococcus because of its frequent production of anorexia, loss of weight and perhaps anemia. Failure in the treatment of gonorrhea usually results from negligence on the part of the patient, lack of cooperation, ignorance, overtreatment and the injudicious use of sulfonamides. Gonorrhea is fundamentally a self-limited disease, and overtreatment only serves to nullify nature's efforts to effect a cure. It seems likely that sulfonamide-resistant cases of female gonorrhea will increase as time goes on. Unauthorized self medication and improper sulfonamide therapy already present a difficult problem in male gonorrhea. Sulfathiazole therapy should not be repeated in the event of a relapse. If, after a free interval of several weeks, evidence of clinical infection (vaginal inflammation and discharge) with negative gonococcus cultures presents itself, a nonspecific bacterial process is reasserting itself after an initial bacteriostatic sulfathiazole effect has worn off. Lactic acid douches have been successful in overcoming this complication. Caution must be exercised in the prognosis given to female patients with gonorrhea. The adoption of a standard record form and its use in treatment centers would expedite the accumulation of sufficient data from which to draw definite conclusions.

Gonorrhea in the Male.—Pelouze states that of the three widely used sulfonamide drugs for the treatment of gonorrhea —sulfanilamide, sulfapyridine and sulfathiazole—the latter is unquestionably best owing to its far lower toxicity.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Heart Journal, London

3:75-144 (April) 1941

Variable Ventricular Complexes in Heart Block and Their Relation to Bilateral Bundle Branch Block. C. W. C. Bain.—p. 75.
Hydrothorax in Heart Failure. D. E. Bedford and J. L. Lovibond.—p. 93.
Comparison of Mercurial Diuretics Used in Heart Failure. W. Evans and T. Paxon.—p. 112.
Coarctation of Aorta with Patent Ductus Arteriosus. J. G. Graham and J. D. O. Kerr.—p. 121.
Myocardial Contusion: Fatal Case. H. Barber and G. R. Osborn.—p. 127.
Ruptured Aortic Valve with Mycotic Aneurysm Due to Acute Bacterial Endocarditis. C. W. C. Bain and S. Wray.—p. 132.

British Journal of Tuberculosis, London

35:53-124 (April) 1941

George Bodington, 1799-1882: Pioneer of Open Air Treatment of Pulmonary Tuberculosis. R. J. Cyriax.—p. 58.
Pathogenesis of Tuberculosis in Calf. E. G. White and F. C. Minett.—p. 69.
Besnier-Boeck's Disease: Review. H. Hannesson.—p. 88.

British Journal of Urology, London

13:1-42 (March) 1941

Juxtarenal Infections. T. Moore.—p. 1.
Ruptured Urethra: Technic for Secondary Repair. C. A. Wells.—p. 8.

British Medical Journal, London

1:739-766 (May 17) 1941

Traumatic Epilepsy After Gunshot Wounds of Head. P. B. Ascroft.—p. 739.
Recent Mortality from Bronchitis in London. R. M. F. Picken.—p. 744.
*Bacteriostatic Effect of Disinfectants in Human Serum and Citrated Plasma. Margaret E. MacKay.—p. 747.
Lactose for Prevention of Odor in Closed-Cast Treatment of Compound Fractures. A. D. Wallis and Margaret J. Dilworth.—p. 750.
Acute Dilatation of Stomach. M. Lee and E. Somerville.—p. 751.

1:767-804 (May 24) 1941

Da Costa's Syndrome (or Effort Syndrome). P. Wood.—p. 767.
Cerebral Symptoms Occurring During Sulfapyridine Treatment of Meningococcic Meningitis. D. F. Johnstone and P. Forgacs.—p. 772.
Loss of Vision Following Hemorrhage. H. L. Tidy.—p. 774.
Upper Arm Splint with Shoulder Yoke as Main Support. J. Kvittingen.—p. 776.
Floss Silk Lattice Posterior Repair Operation for Direct Inguinal Hernia. R. Maingot.—p. 777.

Disinfectants in Serum and Plasma.—MacKay experimented with merthiolate, metaphen, phenyl mercuric nitrate, phenyl mercuric acetate, proflavine, sulfanilamide, thymol and *p*-chlor-*m*-cresol to determine their efficacy as disinfectants for human serum and citrated plasma. Proflavine proved to be the most effective. In a concentration of 1:100,000 it prevented the growth of Staphylococcus aureus and Bacillus subtilis for six days and of enterococci for three days. A dilution of 1:10,000 had no effect on Pseudomonas aeruginosa or mold. Much higher concentrations were equally ineffective against Pseudomonas. The danger of toxic reactions prohibits the use of higher concentrations. Metaphen in a dilution of 1:10,000 inhibited the growth of Staph. aureus and B. subtilis in serum for six days, but enterococci and Ps. aeruginosa grew in this concentration. Merthiolate had an activity of the same order as metaphen, except that no growth of enterococci could be demonstrated in six days in a 1:10,000 concentration. This dilution did not prevent the growth of Ps. aeruginosa. Merthiolate is relatively nontoxic and does not affect serum proteins. Phenyl mercuric nitrate was effective against Staph. aureus and B. subtilis in a dilution of 1:50,000, but not against enterococci after six days, and a 1:10,000 dilution had no effect on Ps. aeruginosa. The growth of mold was inhibited by a 1:80,000 dilution. Drying the serum in the presence of a 1:10,000 dilution of phenyl mercuric nitrate had no effect on the osmotic pressure after reconstitution. The chief objection to its use is its insolubility in water, a saturated solution containing only 0.79 Gm. per liter. Phenyl mercuric acetate appeared effective in a concentration of 1:100,000, but serum proteins were precipitated. Sulfanilamide proved ineffective in inhibiting bacterial growth in serum and plasma. In serum it cannot be relied on for longer than twenty-four hours. Sulfanilamide will prevent the growth of B. subtilis, Micrococcus tetragenus and Pseudomonas in whole blood for thirty days at 39.2 F. but not at 71.6 F. Thymol and *p*-chlor-*m*-cresol were unsuitable as serum preservatives: both allowed the growth of organisms in a dilution of 1:2,000 and precipitated serum protein.

Lancet, London

1:593-622 (May 10) 1941

Apparently Trivial Head Injuries. W. McKissock and B. Brownscombe.—p. 593.
"Substance B" of Diphtheria Toxin and Diffusing Factor. D. McClean.—p. 595.
Peptic Ulcer in Royal Navy: Etiology. R. S. Allison.—p. 596.
Influence of Estrogens on Experimental Canine Diabetes Mellitus. F. G. Young.—p. 600.
Human Diabetes Treated with Estrogens. R. D. Lawrence and Kate Madders.—p. 601.

1:655-684 (May 24) 1941

Address to Royal College of Physicians. C. Wilson.—p. 655.
Diphtheria Bacilli in Floor Dust. W. E. Crosbie and H. D. Wright.—p. 656.
Measurement of Heart in Angular Degrees. F. C. Eve.—p. 659.
*Congenital Pyloric Stenosis Treated with Eumydrine. R. H. Dobbs.—p. 661.
Allergic Reaction to Liver Extract. C. T. Andrews—p. 664.
Bulbar Palsy Due to Atheromatous Vessel. H. J. Anderson and C. P. Petch.—p. 665.
Meningitis Due to Salmonella London. K. F. Wilsdon and Anne Gibson.—p. 665.

Eumydrine for Congenital Pyloric Stenosis.—Dobbs has used eumydrine (atropine methylnitrate) for the treatment of 40 children with congenital pyloric stenosis. The response to eumydrine therapy depends on when vomiting ensued; if the child had not vomited until the fourth week of life, his response was rapid and he could be treated as an outpatient. Medical treatment cured 27 of the children, 8 were operated on, 1 died during medical treatment and 4 died after surgical treatment. Of the cured children, 3 were treated from the outset as outpatients, 20 were discharged within three weeks of admission and 4 remained in the hospital for more than three weeks. The 13 infants who responded rapidly were almost exclusively those who were 4 or more weeks old when vomiting began, and the weight of 12 of these had increased since birth. The average age of these children at the onset of symptoms was 5 weeks, 7 weeks at the time of admission, and they had gained an average of 14 ounces (396 Gm.) over their birth weight. These salient points are emphasized by the corresponding figures of 6 and 10 weeks and a gain of more than 1 pound (0.5 Kg.) in weight for the 3 children who were treated as outpatients. The points are still further emphasized by the fact that the other 14 children who were cured were on an average less than 3 weeks of age at the onset of vomiting, were usually about 4½ weeks old when admitted to the hospital and had lost or had not gained over their birth weight. Of the 12 children operated on in whom treatment with eumydrine failed, all were boys and all but 2 were first born. The author concludes that patients with congenital pyloric stenosis admitted to hospitals will sooner or later respond to medical treatment. Since medical treatment for a few must be lengthy, the relative risks of operation (direct surgical risk and risk of postoperative infection) have to be balanced against the risks of a long hospitalization. The risk of a long hospitalization may, in the long run, prove to be more than counterbalanced by the adverse effects of operation on the resistance of these infants to infection.

Medical Journal of Australia, Sydney

1:629-660 (May 24) 1941

A Surgical Quest. H. S. Newland.—p. 629.
Australian Bread: Its Vitamin B_1 Content and Its Importance in the Australian Dietary. F. W. Clements, E. C. Slater and E. J. Rial.—p. 634.
X-Ray Examination in Recent Head Injuries. A. Schuller.—p. 641.
Agglutinins for Typhoid and Paratyphoid Bacilli in Serum in South Australia. Nancy Atkinson.—p. 642.
Useful Methods in Treatment of Fractures Below the Knee. C. Craig.—p. 644.

Schweizerische medizinische Wochenschrift, Basel

71:457-480 (March 29) 1941

Pregnancy Anemia. H. Guggisberg.—p. 457.
*Typhoid-Paratyphoid Tetanus Vaccination: Immunity Conferred by it and Effect on Serologic Diagnosis of Typhoid. R. Regamey and A. Grumbach.—p. 463.
*Value of Typhoid-Paratyphoid Vaccination. A. Grumbach.—p. 468.
Epidemic Pleurodynia: Observations and Considerations. E. Lejeune. —p. 469.

Typhoid-Paratyphoid-Tetanus Vaccination. — Regamey and Grumbach investigated the degree of antitetanus immunity conferred by typhoid-paratyphoid-tetanus vaccination and its effect on the serodiagnosis of typhoid. The study was based on the inoculation and subsequent examination of 50 subjects who had been divided into two numerically equal groups. The first group consisted of recent recruits about 20 years of age, the second were men already in military service with an age level ranging from 21 to 32 years. Both groups were given the combined vaccination three times, the first at monthly, the second at fortnightly intervals. Both groups were tested thirty-two and one hundred and twelve days after the last vaccination for both the antitoxic and the agglutination titer. In the immunologic test the serums taken on these occasions possessed an average antitoxic titer of 5 international units and 1 international unit, respectively, per cubic centimeter. The test demonstrated tetanus antitoxin levels superior to those afforded by the inoculation of 2,500 international units, the younger subjects making a better showing. All could be regarded as immune. For the serodiagnostic tests the serums were withdrawn thirty-two days and one hundred and twelve days after the last vaccination in order to determine the O, H and Vi agglutinin levels. In their determination of the H and O titers, the authors found that one half of the serums taken one hundred and twelve days after the last vaccination no longer clumped, or only faintly so. The remaining half showed strongly reduced agglutinations in comparison with those sampled after thirty-two days. This reduction was generally more noticeable in the paratyphoid B than in the typhoid agglutinins. No essential differences were observed in the relations between the H and O agglutinins of both groups in respect either to typhoid or to paratyphoid. It seems as if typhoid O agglutinins appear considerably later than the H agglutinins. The H titer was seen to reach quite high levels. Typhoid Vi agglutinins in Widal's microscopic test were found to occur only in a 1 : 2 titer; hence a 1 : 20 titer may be assumed to indicate typhus infection. The authors believe that their observations, limited as they are, bear out the results established by Felix. Since typhoid and paratyphoid B O agglutinins are found in vaccinated subjects, no diagnostic value can be attributed to them in individual cases.

Value of Typhoid-Paratyphoid Vaccination.—Grumbach takes issue with statements belitting the prophylactic value of typhoid-paratyphoid vaccination. These appeared originally in a French publication and were subsequently taken up by a contributor to the *Schweizerische medizinische Wochenschrift*. The French writer maintained that morbidity from typhoid-paratyphoid infection had begun rapidly to disappear in the French army already during the fifty years preceding the introduction of vaccination and that a similarly rapid morbidity decline had been noted since 1914 in the French civilian population, which was not subject to the compulsory vaccination law. The real proof of the efficacy of this vaccination, according to the French writer, lies in the automatic extinction of these diseases in those vaccinated and its persistence in the nonvaccinated. The French writer went so far as to say that "official figures, based on a vaccination material of more than 2,000,000 cases, justified the conclusion that the immunity conferred by typhoid-paratyphoid vaccination was wholly ineffective." Grumbach, in combating the reasoning of the French author and what he calls his manipulation of official statistics, refers to the official report prepared at the direction of the ministry of the French army and navy and published in the bulletin of the International Office of Public Health in 1936. The prophylactic value of typhoid-paratyphoid vaccination is here clearly revealed in the decline of morbidity and mortality rates for the French army and navy and among the colonial troops. While a 100 per cent prophylaxis is highly desirable, a mortality decrease varying from 5 to 20 per cent which cannot be ascribed to other therapeutic measures is not to be treated lightly. The well known lowering of typhoid-paratyphoid infection in the civilian population, clearly attested by postwar (1925-1934) figures, is due to the general progress in public sanitation. Statistics for the English and American armies on French soil during the World War, as well as additional statistics adduced by the author, tell the same story.

Clinica Ostetrica e Ginecologica, Rome

42:297-348 (July) 1940. **Partial Index**

Short Wave Irradiations on Hypophysis in Labor. E. Giudici.—p. 297.
*Treatment of Apparent Death in Newborn Infants. U. Erede.—p. 331.

Treatment of Apparent Death in Newborn Infants.—Erede practiced injection of 10 cc. of a 10 per cent solution of sodium chloride in the treatment of apparent death of newborn asphyxiated infants. The infant is warmed, and the respiratory tract is freed from obstruction. No resuscitation maneuvers were practiced. An assistant holds the umbilical vein while the surgeon injects the hypertonic, solution heated to 40 C., alone or with heart stimulants added to it. The heart starts beating, as a rule, before the injection is finished. If two or three minutes pass without a reaction, nothing more is to be expected from the treatment. The treatment is harmless and has given good results in the last five years.

Ugeskrift for Læger, Copenhagen

103:197-226 (Feb. 13) 1941. **Partial Index**

Physiology and Biology of Vitamin A and Vitamin A Requirement. T. K. With.—p. 197.
*Cases of Precordial Sounds Audible at Distance. J. Frost and J. Bing. —p. 202.

Precordial Sound Audible at Distance.—Frost and Bing report 3 cases with precordial sounds audible at a distance due to adventitious systolic and diasystolic sounds; the first in a healthy young woman in whom no abnormalities could be demonstrated, the second in a young man with spontaneous pneumothorax on the left side, and the third in a young woman with pulmonary tuberculosis and artificial pneumothorax on the left side. The sound was characteristically heard when the patients lay on the left side. In one instance roentgen examination during auscultation verified that the sound occurred when the heart during its movement touched the chest wall. Phonocardiograms in 2 of the cases showed that the sounds correspond to what had previously been called the "systolic clicking" adventitious sound. In one case there was also a corresponding diastolic extra sound. The sound, which suggests the clicking of the tongue used to urge on a horse, has already been used by French clinicians as an aid in diagnosing spontaneous pneumothorax on the left side.

103:227-256 (Feb. 20) 1941. **Partial Index**

*Aortic Insufficiency as Result of Spontaneous Rupture of Aorta. V. Eskelund.—p. 240.

Aortic Insufficiency from Spontaneous Rupture of Aorta.—Eskelund says that ruptures of the aorta are generally traumatic and that the far less frequent so-called spontaneous ruptures occur without demonstrable or known cause. These spontaneous ruptures may be complete and rapidly lead to death, while in other cases dissecting aneurysms are formed. Sometimes healing of a kind takes place, but the thin and inelastic scar tissue gradually yields to the pressure of the blood, and sharply defined aneurysms occur whose opening into the lumen clearly show their formation to be due to a rupture. The author found in the literature eighty-five more or less complete reports of spontaneous ruptures of the aorta, at all ages, fifty-six of them in men. Chronic renal disorders and arteriosclerosis were frequently coexistent. He thinks it likely that the so-called spontaneous rupture is the expression of a pathologic process in the vascular walls and that the rupture most often occurs when the blood pressure rises beyond the limits of the vascular resistance or depends on a relatively unnoticed trauma. In the case described, the spontaneous rupture at the root of the aorta, although healed, caused the development of an aneurysm, and death resulted from insufficiency of the aortic valve through dilatation of the aorta; there were signs of chronic vascular infection of unknown origin.

Book Notices

The Traumatic Neuroses of War. By Abram Kardiner, M.D., Psychosomatic Medicine Monograph II-III. Published with the Sponsorship of the Committee on Problems of Neurotic Behavior, Division of Anthropology and Psychology, National Research Council, Washington, D. C. Paper. Price, $3. Cloth. Price, $3.50. Pp. 258. Washington, D. C.: National Research Council; New York: Paul B. Hoeber, Inc., 1941.

The publication of this excellent monograph is opportune in view of the present world situation and the consequent results of exposure to the traumas of war and the preparations for war. In the foreword and introduction the author states the purpose of the book to be a "guide to the study, treatment and postwar care of those neurotic disturbances which are incidental to war. . . . This book does not purport to treat all the psychic syndromes which can be called the traumatic neuroses. Its purpose is to establish the symptomatology, criteria for differential diagnosis and to establish a rationale for therapy." That the book goes a long way in fulfilling its author's purpose is obvious to the objective reader. The monograph is divided into three parts, clinical, theoretical and practical, and the author cites a wealth of case material to demonstrate the clinical forms of traumatic neuroses together with a careful analysis of the symptomatology, the aspects of the personality involved in the neuroses and a logical and thoughtful discussion of the psychopathology and therapy. The symptomatology is described as acute, transitional and stabilized, the time interval between acute and stabilized varying from two weeks to six months. For the purpose of study the stabilized form is of most importance. From this starting point the author proceeds to discuss the whole subject from a dynamic point of view and does not fall into the common fault of so many writers on this and allied subjects of submitting to the reader a purely descriptive word picture. As the author states, he is not satisfied to discuss content but attempts to shift the emphasis from content to form, to determine which executive function is interfered with and the reason for the interference. This monograph should be in the library of every psychiatrist. It could well be used as a textbook in the study and treatment of traumatic neuroses.

La créatine: Étude physio-pathologique. Par Jean Vague, chef de clinique, et Jean Dunan, chef de laboratoire à la Faculté de médecine de Marseille. Préface du Pr J. Roche. Paper. Price, $1.40. Pp. 256. Paris: Masson & Cie, 1939.

This, the first French monograph on creatine, is a thorough review and evaluation of the literature, particularly from the pathologic and clinical points of view. A brief historical introduction is followed by a discussion of the chemical and physical properties, the structural relations between creatine and creatinine and a list of their derivatives without any data on their properties. The usual possible precursors and degradation products are also given. The analytic section is presented in a fairly critical manner. Although the specific enzyme method of Miller and Dubos is referred to, a detailed description is not given. The authors' own observations are based on results with their own method, which is an improvement over the Folin procedure but which lacks the specificity of the enzyme method. The method for estimating phosphagen phosphate is accepted without questioning either its specificity or the interpretations based thereon. Unfortunately the authors have not, in their evaluation of analytic data from numerous sources, kept in mind the shortcomings of the methods used by many investigators. This is a real difficulty in evaluating the older studies on creatine-creatinine metabolism and distribution. The rapid and progressive synthesis of creatine and phosphagen in embryonic development and the lack of our knowledge of the true precursors is discussed. The usual explanations for creatinuria in the young are given with a tendency to accept the views of Denis and Kramer and Harding and Gaebler that the musculature development is not sufficient to keep up with the creatine as formed during growth. The wide distribution of creatine is considered to call for a very general function; this function is the same as that found in voluntary muscle; that is, one of the links in the complex chemical and physical process involved in the utilization of carbohydrate in muscular activity. In certain invertebrates in which creatine is lacking, the phosphoarginine is considered to function the same way in which phosphocreatine does in mammalian tissues.

The authors emphasize that, although the creatine content of smooth muscle is very low, practically all of it is present as phosphagen, whereas in heart muscle and especially in the ventricle, where the creatine content is high, the proportion present as phosphagen is lower. In fact, the relative amounts of creatine and phosphagen present in a tissue are considered to determine its excitability. The same generalization is again emphasized in connection with contractility, tonicity and excitability of any biologic system including the smooth muscle in secreting glands, in testes, in spermatozoa, and even in the process of mitosis. Under pathologic aspects, myopathy, muscular atrophy, myasthenia gravis and muscular atrophy following rickets are discussed and the possible relation of lesions in the diencephalon, mesencephalon and vegetative nervous system and/or of dietary deficiencies to these disease conditions is suggested. Parkinson's syndrome is characterized by creatinuria without a hypercreatinemia. Lesions of peripheral nerves are frequently associated with a creatinuria which is augmented by the administration of aminoacetic acid. Beriberi and pellagra are also associated with creatinuria. In spite of the frequent lack of correlation of muscle fatigue with changes in the concentration of creatine and creatinine in blood, urine and muscle, the authors nevertheless state that the behavior of the fatigued muscle is in accord with the biochemical concept of muscle activity. In the consideration of circulatory disturbances, attention is called to the fact that thyroxine lowers the creatine and phosphagen content of the myocardium in parallel with the lowering of the glycogen. In the face of contradictory experimental observations the conclusion is arrived at that the creatinuria with a frequently observed hypocreatinemia can be correlated with changes in the creatine and phosphagen content of the diseased myocardium. It is also suggested that careful studies in creatine metabolism in hypertension may lead to important findings.

The irregular observations on creatine in endocrinologic experimental and clinical studies are discussed in detail and attempts are made to account for some of the apparent discrepancies. Thus the creatinuria caused by high doses of insulin is explained as due to the disturbance of carbohydrate metabolism in muscle and the consequent convulsions. The creatinuria among the diabetic is explained as due to a lack of phosphorylation, the accumulation of lactic acid and hence a hyperphosphaturia. The old problem of the site and mode of formation of creatinine from creatine is considered at some length and it is concluded that this may take place in many tissues including the liver and kidney but that the latter is not the only nor the main organ involved. Investigations on the structures in the kidney involved in the excretion of creatinine and on creatinine clearance are discussed in some detail. Although remarkable differences in results and interpretations by various experimenters are referred to, the authors nevertheless advise the routine use of urea, creatinine and inulin clearance tests in kidney diseases. The concluding chapter gives a summary of the clinical exploration and conclusions. The confidence of the authors in their interpretations is well illustrated by their statement that, if most of the neuromuscular, digestive, hepatic, endocrine and nutritional disturbances were adequately studied in terms of creatine-creatinine metabolism, data of considerable diagnostic value would become available. The bibliography is limited to the period after 1934 and references are given to previous bibliographies. Separate subject and author indexes are included.

Nociones de dermatología y sifilografía. Por el Dr. V. Pardo Castello, professor auxiliar de dermatologia y sifilografia de la Universidad de la Habana, Cuba, con la colaboración de los doctores Ismael Ferrer et al. Prólogo del Dr. Braulio Sáenz. Second edition. Cloth. Pp. 992, with 276 illustrations. Habana: Cultural, S. A., 1941.

In this edition of one of the most popular dermatologic textbooks used in the Ibero-American countries, one is most struck by the clear, concise style and the logical arrangement of the material. All the known dermatoses, including the exanthems and the cutaneous diseases peculiar to the tropics, are discussed. The orderly, clearcut presentation of the subject matter is ideal

for the student. The absence of discussion of controversial etiologic theories conserves considerable space and also simplifies the subject matter for the student, but it removes a stimulus to thinking for oneself. An excellent feature is the comprehensive discussion of differential diagnosis with regard to each dermatosis considered. The volume is thoroughly up to date. For instance, the influence of strain and instability of the nervous system in the causation of certain of the functional dermatoses is mentioned. The avitaminoses and the indications for vitamin therapy in these disorders and in other dermatoses are discussed. The author is obviously conversant with the use of sulfanilamide and its derivatives in dermatology. In such a modern textbook it is rather surprising to find "hematoporphyrin" used when it is evident that "increase in porphyrins" is meant. To the reviewer the most significant chapters are those on the tropical dermatoses, lymphogranuloma venereum and the lipoidoses.

The section on syphilis is complete, and the detailed clinical descriptions of its cutaneous manifestations are unusually good. The methods of treatment for the most part parallel those used by the Cooperative Clinical Group in the United States. The essentials of therapy are given graphically in a practical and handy table. The discussion of treatment reactions is exceptionally complete and instructive.

The author's presentation reflects a happy blend of the views held by North American and by Ibero-American schools of dermatologic thought. The pronounced differences so often evident between the views and the presentation in medical textbooks by Latin authors and those in their Anglo-Saxon counterparts are absent.

The book is set in clear, large type, the illustrations are more than satisfactory and the binding is exceptionally fine.

Studies on Tuberculosis. The Spread of Tuberculosis in Negro Families of Jamaica, B. W. I. By E. Joyce Saward, Persis Putnam and Eugene L. Opie. The Fate of Negro Persons of a Tropical Country, Jamaica, B. W. I., After Contact with Tuberculosis. By Eugene L. Opie, Persis Putnam and E. Joyce Saward. A Survey of Tuberculous Infection in a Rural Area of East Alabama. By A. H. Graham, P. W. Auston and Persis Putnam. The Fate of Persons Exposed to Tuberculosis in White and Negro Families in a Rural Area of East Alabama. By A. H. Graham, P. W. Auston and Persis Putnam. The American Journal of Hygiene Monographic Series, No. 16, February 1941. Supported by the De Lamar Fund of the Johns Hopkins University. Cloth. Price, $1.10. Pp. 198, with illustrations. Baltimore: Johns Hopkins Press, 1941.

This work consists of the presentation of the results of several studies on tuberculosis: The first deals with the spread of this disease in Negro families of Jamaica, where it was found that more than 60 per cent of the children from birth to 4 years with manifest tuberculosis in the family react to tuberculin. By the age of 20 years, almost 100 per cent react. The authors state that tuberculosis in the Negro race of Jamaica pursues a much more rapid course than that of white people of European extraction. They point out further that nearly all persons who suffer from pulmonary tuberculosis in Jamaica are disseminators of tubercle bacilli.

The second study concerns the fate of Negro persons of Jamaica after contact with tuberculosis. The authors state that to acquire tuberculosis it is not necessary that infection occur in childhood, since the adults of Jamaica respond as readily to exogenous infection as the children. They are of the opinion that the high level and rising incidence frequency and mortality from tuberculosis in adolescents and adults following exposure to the disease occur as the result of exogenous tuberculous infection.

The third study constitutes a survey of tuberculous infection in a rural area of East Alabama. An initial test dose of 0.01 mg. of tuberculin, with potency well determined, was used. Those who did not react were given 1 mg. as the second dose. Interpretations were based on the presence of induration and not on the area of redness of the skin. Single films were made of the chests of the reactors. All persons whose shadows proved to be due to clinical tuberculous lesions were referred to private physicians for treatment. The frequency of reactors to tuberculin increased with age but was less rapid among Negroes than among white persons. However, when sensitivity was established in Negroes it was more intense and more likely to persist than in Caucasians. The frequency of reactors who presented lesions by roentgen ray inspection increased with age.

The fourth study deals with the fate of persons exposed to tuberculosis in white and Negro families in a rural area of eastern Alabama. In Lee County they found that manifest tuberculosis begins earlier, runs a shorter, sharper course and more frequently ends fatally among Negroes than among white persons. They found that tuberculosis spreads from persons suffering with the disease to those in contact with them. This is true of persons whose exposure begins in adult life as well as of those first exposed in infancy, childhood and adolescence.

Die Brücke: Klinische Bilder in sechs Sprachen. Ein Hilfsbuch für Ärzte bei der Behandlung fremdsprachiger Patienten. Von Prof. Dr. Med., Dr. Phil., Dr. Med. Dent. Fritz Lejeune, Wien. Unter Mitarbeit von Dr. S. E. de Botton von der Medizinischen Fakultät der Universität Paris, Dr. Andresen da Costa-Lissabon, Dr. George Northcroft-London, Prof. Dr. T. Oliaro von der Med. Fakultät der Königl. Universität zu Turin, Prof. Dr. Fr. Oliver Rubió von der Medizinischen Fakultät der Universität zu Zaragoza. Cloth. Price, 18 marks. Pp. 690. Leipzig: Georg Thieme, 1941.

Here is an extraordinary contribution to popular health education in medicine and in languages. In parallel columns the author presents in German, English, French, Italian, Spanish and Portuguese the conversations which a doctor might have with his patient on a great number of common diseases. Physicians in each of the nations concerned have collaborated with him in the preparation of his text. He says "I hope with my collaborators that this book will become a real bridge for all the doctors of the six countries. It is designed to give a helping hand to the patient and the doctor in the consulting room, in hospitals in the foreign countries, on expeditions, on board ship, and last but not least in military hospitals." The conversations are ingeniously conceived but there seems to be a considerable wastage of space in making the conversations resemble the realistic which perhaps might better have been devoted to actual clinical material. For instance, the section on gallstones begins as follows:

Husband. Thank goodness that you have come, doctor, I cannot bear to see my wife suffer like this. She is nearly mad with the pain and has been vomiting almost pure bile.

Doctor. How did it actually happen?

Husband. Very suddenly, doctor. She went to bed perfectly well. About 1:30 a. m. she woke up complaining of a terrible pain in the stomach and back. I put on a hot fomentation and then gave her a brandy and some camomile tea. But she only became worse, and a little later the vomiting started. At one moment, she almost fainted. We did not want to disturb you, but finally we could not help it.

Again in discussing gout the doctor says laughingly:

But, Mr. Peterson, what about the gay evening? I am sure that you did not do yourself badly, and now you have to suffer for it.

Patient. Do not make bad jokes, doctor, but far better help me. After all you are no enemy to a glass of good port.

Thus the volume is both instructive and entertaining.

Textbook of Pediatrics. By J. P. Crozer Griffith, M.D., Ph.D., Consulting Physician to the Children's Hospital, Philadelphia, and A. Graeme Mitchell, M.D., B. K. Rachford Professor of Pediatrics, College of Medicine, University of Cincinnati, Cincinnati. Third edition. Cloth. Price, $10. Pp. 891, with 220 illustrations. Philadelphia & London: W. B. Saunders Company, 1941.

This is a complete revision and rewriting of the book called "Diseases of Infants and Children," first published by these authors in 1933 and revised in 1937. Recognizing the great advances that have been made in many aspects of medical science, the authors have called on a number of specialists to aid them in the consideration of special topics, so that this edition represents essentially a system or symposium of pediatrics rather than the work of two authors. In order to condense the volume, the bibliography has been omitted, which, however, is available to those who want it from the National Research Council. Chapters have been added on some subjects, notably one on mental growth and development. By the use of distinguishing type and by a large amount of tabulation the authors have been able to produce a compact, authoritative and useful volume. If there is any criticism, it must apply to the rather poor printing of the illustrations, many of which are old. The reviewer paid special attention to several topics with a view to determining whether or not the considerations of diagnosis and treatment have been brought up to date and found in each instance that the contribution represented the latest available information. The book may be recommended, therefore, as a work suitable both to the student and to the practitioner for continuous study as well as for reference.

Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

ABSORPTION OF LIGHT BY SKIN

***To the Editor:*—The pigment cells of the skin absorb light. What happens to the energy which is bound to develop after this absorption? Is there any proof that this energy acts within the skin, for instance, liberating the loosely bound histamine? Could you refer me to literature on the subject of light and pigmentation?**

M.D., Missouri.

ANSWER.—Probably most of the energy transformed from the light being absorbed by pigment as well as other structures in the skin, and by the fluids such as the lymph and blood, is transformed into heat. Portions of this energy may be utilized for developing light of new wavelengths—fluorescence. Still other portions of this energy are utilized for chemical reactions; it is known that ultraviolet radiation may act as an oxidizing agent. It is probable that histamine is liberated in varying amounts. Some people develop urticaria on exposure to sunlight and others an erythema or severe dermatitis on exposure to light, which probably takes place with the release of histamine or histamine-like bodies.

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Merkelbach, O.: Skin Pigmentation and Dopa-Melanin, *Radiol. Clin.* **8:** 13, 1939.

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POSSIBLE ADENOPATHY FROM HAIR DYE

***To the Editor:*—A white woman aged 31 had a painful adenopathy in the postauricular, preauricular, posterior cervical, supraclavicular and epitrochlear areas bilaterally and pain in the right upper quadrant of the abdomen. There were associated hemorrhagic ulcerations in the throat. There was a low grade fever, mild secondary anemia, and a white blood count and differential smear which were essentially normal. All of this apparently followed by one week the dyeing of the patient's hair with a substance called "Clairol." In about a month, with the use of reduced iron all symptoms disappeared. Two weeks ago the girl redyed her hair. Four days ago she complained of stiffness of both trapezius muscles. Examination revealed a return of the postauricular and posterior cervical lymphadenopathy. There is no fever, no anemia, no throat ulceration. What is the composition of "Clairol"? Do the symptoms suggest anything other than a reaction to the hair dye? What other tests may be carried out in addition to a biopsy of a gland? What other disease entities in addition to Hodgkin's disease, possible early leukemia and infectious mononucleosis, must be considered?**

Harold J. Reese, M.D., Youngstown, Ohio.

ANSWER.—"Clairol" comes in two forms: "Instant Clairol" and "Progressive Clairol." The former dyes hair permanently in one application, while the latter is more in the nature of a tint. From information received from the manufacturers in 1934 it appeared that "Instant Clairol" contained a hair dye of the aniline derivative type. Judging by the advertising of the firm, some of the "Progressive Clairol" preparations apparently contain a similar substance but in more dilute form. The synthetic compounds most commonly used in hair dyes are paraphenylenediamine, paratoluylenediamine and pyrogallol. Medical literature abounds in descriptions of mishaps following the application of these substances. Paraphenylenediamine has been noted on numerous occasions to produce local dermatologic changes on application to the hair of the head or the eyelashes. Localized edema, erythema, vesicle formation, conjunctivitis and ulcerative keratitis are among the conditions seen. Local changes in the tissues of the scalp usually occur within twenty-four to forty-eight hours after the application of the dye, but delayed changes have been noted. Among fur workers using this agent attacks of an asthmatic nature are described. Several cases of systemic poisoning have been noted. In one there was an acute onset associated with severe cyanosis and prostration—symptoms resembling acute aniline poisoning. Two fatal cases have been independently reported in both of which the principal feature was jaundice due to a severe toxic hepatitis. An anemia, often macrocytic and with aplastic features, has been fairly constant in reported cases of systemic poisoning. Independent observers have also noted systemic symptoms following the coincidental application of hair dye and "permanent wave" solutions. Toluylenediamine experimentally produces liver damage associated with jaundice. No specific reports of toxic effects from pyrogallol in hair dye have been recorded in the literature. This substance, under other circumstances, has been known to produce marked renal damage, methemoglobinemia and hemolysis of red cells.

The picture presented by this patient does not definitely fit any of the described clinical syndromes associated with hypersensitivity to aniline hair dyes. However, it must be remembered that these syndromes are by no means rigidly defined. Localized cervical and preauricular lymphadenopathy resulting from a possible toxic dermatitis of the scalp associated with anemia and right upper quadrant abdominal discomfort, occurring in close time relationship to the dyeing of the hair, should lead to a definite suspicion of the dyeing as an etiologic factor. The length of the symptom-free interval between the first and second dyeing is not stated, but the longer this healthy period the less one would suspect an underlying disease entity and the more one's attention would center on the dyeing. A patch test of the patient with the hair dye should be a helpful procedure. Since these agents may produce a toxic hepatitis, liver function tests may be of diagnostic value. If after a few weeks there is definite persistence of the lymphadenopathy, biopsy of a node is indicated. Persistence of lymphadenopathy with a normal peripheral blood picture would make a sternal puncture desirable. Heterophile antibody agglutination tests may be helpful in establishing a diagnosis of infectious mononucleosis.

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IDENTIFICATION OF INTRA-ABDOMINAL GAUZE SPONGE WITH ROENTGEN RAYS

***To the Editor:*—Is it often possible to make a diagnosis of the presence of a gauze sponge in the abdominal cavity by the use of roentgenograms? I recently heard some one say that a roentgenogram had shown the presence of a sponge of gauze, and I was rather reluctant to believe that such a diagnosis could be made with any degree of certainty.**

M.D., Maine.

ANSWER.—A gauze sponge in the abdominal cavity cannot be visualized by ordinary roentgen examination or by fluoroscopic examination. Most surgeons attach a metal ring to any gauze napkins or gauze sponges which are introduced within the abdominal cavity. A roentgenogram of the abdomen or even fluoroscopic study will readily reveal the metal ring. If the gauze sponge is large its presence in the abdomen may be surmised by giving an opaque meal and discovering the characteristic displacement of intestinal coils away from the mass formed by the nonopaque sponge, when otherwise the coils of intestine would exhibit an undisturbed pattern. However, the same phenomenon would be produced by any kind of space-occupying mass, such as a pocket of pus or a tumor. In rare instances the presence of a foreign body has given rise to infection and the production of an external fistula. Injection of opaque oil with a little pressure into such a fistulous tract might visualize the gauze mesh of the sponge and thus help one to recognize it definitely as a gauze pad. A radiologist of a large experience in roentgen study of abdominal conditions, in answering an inquiry, replied that he had been called on to locate a possible forgotten sponge not over three times in thirty-five years of radiologic work. Evidently the accident is not a common one.

PERITONSILLAR ABSCESS AND TONSILLECTOMY

***To the Editor:*—What is considered the best treatment of peritonsillar abscess? I have heard of tonsillectomy as the treatment; it sounds radical to me. I should like to have you comment on this specifically.**

M.D., Kansas.

ANSWER.—The best treatment of peritonsillar abscess, in the opinion of a number of qualified observers, is incision and drainage. The use of sulfanilamide and allied remedies has not worked as well as hoped at first. Trousseau's maxim to the effect that nothing can abort the course of quinsy is probably as true now as it was on the day it was uttered.

Tonsillectomy for the cure of peritonsillar abscess has been recommended by a number of laryngologists, and several papers have been published, each with case reports. The general feeling still is that this is radical treatment, and most specialists would in all likelihood feel that it is not fundamentally good

surgical practice to remove tonsils in the presence of an infection of this character. There is, furthermore, the difficulty of inducing an effective local anesthesia and the undesirability of using a general anesthetic.

To this the proponents of the idea respond that in their experience there have been few or no complications. They say that, when an incision is made and spread to evacuate the peritonsillar abscess, the tonsil already to a large extent is enucleated. Tonsillectomy at a later period when healing and scarring have occurred is often difficult and carries the risk of hemorrhage, both primary and secondary.

It is likely that for a long time to come the more frequently used method of incision and drainage will remain the method of choice.

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OSTEOID OSTEOMA

To the Editor:—**A man aged 46 has had pain, tenderness and swelling localized on the mediodorsal aspect of the right wrist since January 1938. The family and personal history is noncontributory. Laboratory data and the Wassermann reaction are negative. There is no history of trauma. A roentgenogram taken in August 1940 revealed a calcified mass extending from the hook of the os hamatum and a slight narrowing of the corresponding carpometacarpal joint. The mass was subsequently removed and proved to be of an inflammatory nature (osteomyelitis). The hand was kept immobilized for five weeks, during which time the patient was free from symptoms. As soon as the cast was removed a slight swelling reappeared in the same area, followed by pain and tenderness, which seemed to increase in intensity and frequency. However, the patient is able to use his hand. Several roentgenograms showed only slight narrowing of the joint spaces without other pathologic changes. Clinically, the condition seems to take the same course as at the onset. I would appreciate suggestions as to further treatment, the value of roentgen therapy in subacute osteomyelitis, and any contraindications for roentgen therapy.**

M.D., New York.

ANSWER.—"Osteoid osteoma" is the descriptive term used by Jaffé in discussing a group of cases in which there were isolated lesions of the small bones of the hands or feet similar to that described in this query. These were formerly considered to be osteomyelitic and bacterial in origin and varied from the Garré type of sclerosing osteomyelitis of a long bone to the small proliferating lesion of a phalanx similar to that which involved a carpal bone in this patient.

Rarely have cultures from lesions such as these yielded bacteria, and Jaffé considers them to be slow-growing neoplasms.

The treatment has been surgical, but Jaffé has suggested the use of roentgen therapy as a logical substitute or adjunct in dealing with the localized osteoid masses.

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LATE RESULTS OF COLLES FRACTURE

To the Editor:—**What objective and subjective symptoms are present eight months after a Colles fracture is treated properly in a healthy man? When pushing with the upper extremities, what percentage of force is osseous and what percentage ligamentous? When pulling with the upper extremities what percentage of force is osseous and what ligamentous? Assuming that an adult has a Colles fracture and it is properly treated, what would account for hyperextension of the wrist, pain to active and passive motion (especially while in extension) and loss of sensation in distribution of the radial nerve below the site of fracture? I hope I have made myself clear. Please give an opinion.**

M.D., South Carolina.

ANSWER.—Neither objective nor subjective symptoms should be present in the wrist of a healthy adult man eight months after a Colles fracture has been adequately reduced and has united in good position.

No data have been found which pretend to estimate scientifically the relative strains on bones or ligaments in the push or pull effort for the upper extremities. When pushing with the upper extremities the greater force is exerted by the bones. When pulling with the upper extremities there is more strain on the ligamentous structures which hold the bones together. Hyperextension of the wrist of an adult following proper treatment of a Colles fracture may result from extensive injury to the anterior capsule of the joint.

Pain on active and passive motion may also be the result of incompletely healed injuries to the soft tissues, such as capsule and ligaments, to traumatic arthritis resulting from injury to the articular surfaces in the wrist joint or to callus which may form within in the wrist joint if the fracture line entered that articulation.

The radial nerve is primarily motor. The superficial ramus or sensory branch of the radial nerve may have been injured by the sharp edge of a fracture fragment or it may have become incorporated in and compressed by the callus.

INHERITANCE OF VITILIGO

To the Editor:—**A man and his wife both have vitiligo. Neither can give a history of familial vitiligo. They wish children but fear that the children may also suffer from vitiligo. What chances are there that this may occur? The woman refuses to become pregnant unless she can have reasonable assurance that her children will not be afflicted.**

M.D., California.

ANSWER.—The cause of vitiligo is obscure. It is presumably a trophoneurosis and is frequently associated with neurotic disturbances. In some cases there is evidence of hereditary influences. Recently Merenlander and Rywlin (*Acta dermat-venereol.* **24**:583 [July] 1940) reported the occurrence of the disease in a grandmother, father and daughter. They stated that they had noted only seven instances of hereditary transmission of acquired vitiligo until 1933, and their case is the only once since. (Abstract by Wise and Sulzberger in the Year Book of Dermatology and Syphilology, 1940, page 269.) Stelwagon (Diseases of the Skin, ed. 9, Philadelphia, W. B. Saunders Company) states that "at times vitiligo is hereditary. It is undoubtedly to be looked upon as a neurosis and of more frequent occurrence in neurotic individuals."

On the basis of this evidence it is up to the physician to discuss with the parties the relative insignificance of vitiligo as compared to other stigmas that may occur in the newborn. With a simple condition like vitiligo, which is of only cosmetic consequence and has no serious constitutional significance, it is probably not important enough to avoid pregnancy if there is a great desire, on the part of both parties, to have children.

DUODENAL ULCER AND BAROMETRIC PRESSURE

To the Editor:—**A man has a duodenal ulcer. The fact has been confirmed twice by roentgen examination, the last time being three months ago. In clear weather, pressure over the upper abdominal region usually brings relief; immediately preceding a rain, no relief is obtained. He states that while working in a subbasement he may experience pain in the upper abdominal region, frontal headache, flushed face, a sensation of stiffness over the forehead and cheeks, marked flatulence, hypermotility of the bowels and occasionally chills. He notes the time these sensations and symptoms appear and when they leave. On returning to "daylight" he always observes that these symptoms make their appearance immediately before the rain starts and, as the rain subsides, the unpleasant sensations disappear. Any explanation to account for these abnormal sensations will be appreciated.**

Carl E. Pieck, M.D., Covington, Ky.

ANSWER.—A definite explanation cannot be given for the symptom response this patient shows to weather change. Barometric pressure fluctuations and their resultant effects on tissue water content, are probably responsible, but the matter needs careful study under controlled experimental conditions before a definite answer can be given. Nervously unstable patients often suffer somewhat from this type of response to falling barometric pressure as a "low" center is approaching or passing. Those with habitual headaches or fainting attacks are particularly prone to suffer seizures at the time of such weather crises and to have least trouble during periods of rising pressure (clear, cool weather). People bothered with flatulence also often find their trouble worse during falling pressure periods. Ordinarily the barometric pressure changes from a falling to a rising phase either during or soon after the period of rain. Careful experimental study of pressure change effects in the future may yield interesting and useful information regarding the mechanism of man's response to weather changes.

MERCURIAL DIURETICS VALUELESS FOR SYPHILIS

To the Editor:—**What, if any, is the antisyphilitic value of the mercurial diuretics such as salyrgan? The patient that I have in mind has received several hundred intravenous injections of salyrgan in the past three years.**

M.D., Florida.

ANSWER.—None.